

LLNL Livermore Site Fourth Quarter 2011 Self-Monitoring Report

The following is the fourth quarter 2011 self-monitoring data for the treatment facilities and Lake Haussmann at the Lawrence Livermore National Laboratory (LLNL) Livermore Site.

The volumes of ground water and soil vapor treated, and volatile organic compound (VOC) mass removed during the fourth quarter of 2011 are presented in Tables 1 and 2, respectively. An historical summary of VOC volume and mass removed are presented in Tables 3 and 4, respectively.

Attachment A presents results of ground water treatment facility and extraction well (ground water and soil vapor) VOC and chromium analyses (Tables A-1 through A-4). Very low concentrations of trichloroethene (TCE) were detected in the December 2011 TFC East and TFD East effluent samples, 0.6 ppb and 2.0 ppb, respectively. However during the fourth quarter of 2011, all effluent sample analytical results were within acceptable discharge limits.

Self-monitoring reports for all treatment facilities are presented in Attachment B. Monthly volumes of ground water extracted are shown in Attachment B; however, instantaneous flow rates are not shown for wells that are now only used for sampling and are not continuously pumped. The monthly volume shown for these wells is the quantity of water evacuated for sampling purposes. Monitoring data for Lake Haussmann are presented in Attachment C.

A map showing Livermore Site treatment areas and treatment facility locations, and ground water elevation contour maps showing hydraulic capture zones for hydrostratigraphic units (HSUs) 1B, 2, 3A, 3B, 4, and 5, are presented in Attachment D. The contour maps for the individual HSUs are based on data collected during the fourth quarter of 2011.

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Table 1. Volumes of ground water and soil vapor extracted and treated at the Livermore Site, October through December 2011.

Treatment Area^a	Month	Volume of ground water extracted (Kgal)^b	Volume of vapor extracted (Kft³)^b
TFA	October	10,104	-
	November	7,582	-
	December	9,273	-
TFB	October	1,484	-
	November	2,164	-
	December	2,186	-
TFC	October	3,775	-
	November	3,854	-
	December	3,316	-
TFD	October	5,777	1,311
	November	6,270	1,373
	December	5,770	1,095
TFE	October	1,732	1,283
	November	1,772	1,451
	December	1,736	1,509
TFG	October	752	-
	November	726	-
	December	667	-
TFH	October	882	2,170
	November	1,103	2,042
	December	1,031	1,615
TOTAL^c		71,956	13,849

^a Totals include ground water and soil vapor extracted from the following facilities:

TFA area: TFA, TFA-E, TFA-W

TFB area: TFB

TFC area: TFC, TFC-E, TFC-SE

TFD area: TFD, TFD-E, TFD-HPD, TFD-S, TFD-SE, TFD-SS, TFD-W, VTFD-ETCS, VTFD-HS

TFE area: TFE-E, TFE-HS, TFE-NW, TFE-SE, TFE-SW, TFE-W, VTFE-ELM, VTFE-HS

TFG area: TFG-1, TFG-N

TFH area: TF406, TF406-NW, TF518-N, TF518-PZ, TF5475-1, TF5475-2, TF5475-3, VTF406-HS, VTF511, VTF518-PZ, VTF5475

TFF started operation in February 1993 for fuel hydrocarbon remediation. In August 1995, the regulatory agencies agreed that the vadose zone remediation was complete, and in October 1996 a No Further Action status was granted for the ground water.

^b Totals are derived from individual extraction wells shown in Attachment B

^c Rounded number

Kft³ = thousands of cubic feet

Kgal = thousands of gallons

Table 2. VOC mass removed at the Livermore Site, October through December 2011.

Treatment Area^a	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg) ^b
TFA	1.1	-	1.1
TFB	0.6	-	0.6
TFC	1.2	-	1.2
TFD	6.8	0.6	7.4
TFE	2.5	1.0	3.5
TFG	0.2	-	0.2
TFH	0.9	7.2	8.1
TOTAL^b	13.3	8.8	22.1

Table 3. Historical summary of volumes of water and soil vapor removed at the Livermore Site through December 2011.

Treatment Area^a	Volume of ground water extracted (Mgal)	Volume of vapor extracted (Mft³)
TFA	1,857	-
TFB	439	-
TFC	479	-
TFD	1,001	95
TFE	365	159
TFG	80	-
TFH	161	232
TOTAL^b	4,382	486

Table 4. Historical summary of VOC mass removed from water and soil vapor at the Livermore Site through December 2011.

Treatment Area^a	VOC mass removed from ground water (kg)	VOC mass removed from soil vapor (kg)	Total VOC mass removed (kg) ^b
TFA	207	-	207
TFB	79	-	79
TFC	103	-	103
TFD	840	93	933
TFE	217	148	365
TFG	11	-	11
TFH	38	1,234	1,272
TOTAL^b	1,495	1,475	2,970

^a Refer to Table 1 footnote for facilities in each treatment facility area.^b Rounded number.

Abbreviations for Tables 2, 3 and 4:

kg = Kilograms.

Mft³ = millions of cubic feet.

Mgal = millions of gallons.

VOC = Volatile organic compound.

Attachment A

VOC and Chromium Analyses

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFA													
TFA-I001	04-OCT-11	E601	<0.5	0.93	0.99	<0.5	1.4	<1	<0.5	5.9	<0.5	0.62	<0.5
TFA-I001	01-NOV-11	E601	<0.5	0.89	0.76	<0.5	1.1	<1	<0.5	6.2	<0.5	0.89	<0.5
TFA-I001	01-DEC-11	E601	<0.5	1.4	0.8	<0.5	1.2	<1	<0.5	6.1	<0.5	0.68	<0.5
TFA-E001	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E001	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-E													
W-254	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	32	<0.5	0.93	<0.5
STU06-I	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	34	<0.5	1	<0.5
STU06-I	01-DEC-11	E601	<0.5	0.95	<0.5	<0.5	0.54	<1	<0.5	36	<0.5	1.1	<0.5
STU06-E	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
STU06-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
STU06-E	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFA-W^a													
W-404	20-DEC-11	E601	<0.5	<0.5	1	<0.5	1.7	<1	<0.5	10	<0.5	0.53	<0.5
TFA-W-E	20-DEC-11	E624	<1	<1	1	<1	1.7	<1	<1	11	<1	0.51	<1
TFB													
TFB-I002	04-OCT-11	E601	0.53	2.7	<0.5	<0.5	1.9	<1	4.1	1.7	<0.5	14	<0.5
TFB-I002	01-NOV-11	E601	<0.5	2	<0.5	<0.5	1.4	<1	3.4	1.4	<0.5	12	<0.5
TFB-I002	01-DEC-11	E601	<0.5	2.7	<0.5	<0.5	1.4	<1	3.2	1.3	<0.5	12	<0.5
TFB-E002	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFB-E002	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC													
TFC-I003	04-OCT-11	E601	<0.5	0.95	<0.5	<0.5	0.62	<1	9	2.7	<0.5	9.8	<0.5
TFC-I003	01-NOV-11	E601	<0.5	0.84	<0.5	<0.5	0.55	<1	8.2	2.5	<0.5	8.9	<0.5
TFC-I003	01-DEC-11	E601	<0.5	1.4	<0.5	<0.5	0.68	<1	9.2	2.9	<0.5	10	<0.5
TFC-E003	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFC-E003	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFC-E													
MTU1-I	12-OCT-11	E601	<0.5	12	<0.5	<0.5	0.77	<1	11	0.66	<0.5	8.1	3.5
MTU1-I	01-NOV-11	E601	<0.5	15	<0.5	<0.5	0.95	<1	11	0.78	<0.5	10	3.9
MTU1-I	01-DEC-11	E601	<0.5	15	<0.5	<0.5	0.82	<1	9.6	0.62	<0.5	8.7	3.4
MTU1-E													
MTU1-E	12-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU1-E	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	0.6	<0.5
TFC-SE													
PTU1-I	06-OCT-11	E601	<0.5	7.2	<0.5	<0.5	2.2	<1	16	0.65	<0.5	17	0.96
PTU1-I	01-NOV-11	E601	<0.5	6.9	<0.5	<0.5	2.2	<1	14	0.69	<0.5	16	0.83
PTU1-I	01-DEC-11	E601	<0.5	7.7	<0.5	<0.5	2.3	<1	15	0.62	<0.5	17	0.84
PTU1-E													
PTU1-E	06-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU1-E	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD													
TFD-I004	06-OCT-11	E601	2.3	2.4	<0.5	<0.5	2.3	<1	0.59	3.4	<0.5	75	18
TFD-I004	01-NOV-11	E601	2.1	2	<0.5	<0.5	1.3	<1	0.56	2.3	<0.5	64	17
TFD-I004	01-DEC-11	E601	2.6	3	<0.5	<0.5	1	<1	0.66	1.7	<0.5	72	21
TFD-E004													
TFD-E004	06-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E004	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-E													
PTU8-I	12-OCT-11	E601	4.2	2	0.67	2.2	4.1	<1	<0.5	4.7	<0.5	140	2.6
PTU8-I	01-NOV-11	E601	2.4	1.2	0.51	1.9	2.9	<1	<0.5	3.4	<0.5	95	1.4
PTU8-I	01-DEC-11	E601	3.3	2.7	0.65	2.6	3.9	1	<0.5	4.7	<0.5	80	1.5
PTU8-E													
PTU8-E	12-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU8-E	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2	<0.5
TFD-HPD^b													
TFD-S													
PTU2-I	10-OCT-11	E601	0.82	2.3	<0.5	<0.5	5.4	<1	1.5	8.1	<0.5	65	<0.5

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Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFD-S (cont.)													
PTU2-I	03-NOV-11	E601	0.78	2.1	<0.5	<0.5	4.8	<1	1.3	6.8	<0.5	60	<0.5
PTU2-I	12-DEC-11	E601	0.84	2.4	<0.5	<0.5	5.6	<1	1.5	8.3	<0.5	70	<0.5
PTU2-E	10-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	03-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU2-E	12-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-SE													
PTU11-I	04-OCT-11	E601	<0.5	2.5	0.66	1.2	6	<1	0.6	16	<0.5	52	<0.5
PTU11-I	01-NOV-11	E601	<0.5	2.2	0.67	1.2	7.9	<1	0.59	31	<0.5	74	<0.5
PTU11-I	01-DEC-11	E601	<0.5	3.1	0.59	1	7.2	<1	0.62	27	<0.5	70	<0.5
PTU11-E	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU11-E	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-SS													
PTU12-I	21-OCT-11	E601	0.69	2.1	1	3.3	13	1.1	<0.5	31	<0.5	170	7.1
PTU12-I	03-NOV-11	E601	0.95	1.9	0.85	2.9	11	<1	<0.5	22	<0.5	130	6.4
PTU12-I	13-DEC-11	E601	0.99	1.9	0.74	2.5	10	<1	<0.5	20	<0.5	120	7.7
PTU12-E	21-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	03-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU12-E	13-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFD-W													
PTU6-I	04-OCT-11	E601	<0.5	4.8	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	6.1	52
PTU6-I	07-NOV-11	E601	<0.5	4.1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.3	44
PTU6-I	13-DEC-11	E601	<0.5	4.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.9	48
PTU6-E	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	07-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU6-E	13-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-E													
PTU3-I	04-OCT-11	E601	<0.5	4.4	<0.5	<0.5	12	<1	7.7	12	<0.5	79	<0.5
PTU3-I	01-NOV-11	E601	<0.5	3.3	<0.5	<0.5	9.4	<1	6.4	12	<0.5	73	<0.5
PTU3-I	01-DEC-11	E601	<0.5	4	<0.5	<0.5	7.4	<1	7.6	7	<0.5	59	<0.5
PTU3-E	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-E (cont.)													
PTU3-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU3-E	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-HS													
W-2105	04-OCT-11	E601	<0.5	1.2	<0.5	<0.5	3.7	3.1	7.7	15	<0.5	330	<0.5
GTU07-I	04-OCT-11	E601	<0.5	1.2	<0.5	<0.5	2.9	2.9	7	13	<0.5	320	<0.5
GTU07-I	01-NOV-11	E601	<0.5	1.1	<0.5	<0.5	2.7	2.4	6	13	<0.5	290	<0.5
GTU07-I	05-DEC-11	E601	<0.5	2.1	<0.5	<0.5	3	2.3	5.8	14	<0.5	280	<0.5
GTU07-E	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU07-E	05-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-NW													
PTU9-I	21-OCT-11	E601	<0.5	1.4	<0.5	<0.5	<0.5	<1	1.1	<0.5	<0.5	14	<0.5
PTU9-I	03-NOV-11	E601	<0.5	1.2	<0.5	<0.5	<0.5	<1	0.91	<0.5	<0.5	12	<0.5
PTU9-I	12-DEC-11	E601	<0.5	1.2	<0.5	<0.5	<0.5	<1	1	<0.5	<0.5	14	<0.5
PTU9-E	21-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	03-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
PTU9-E	12-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-SE													
W-359	04-OCT-11	E601	5.1	1.4	0.64	<0.5	26	<1	6	9	<0.5	340	1.4
MTU04-I	01-NOV-11	E601	5	1.2	0.52	<0.5	20	<1	5	8.8	<0.5	340	1.4
MTU04-I	01-DEC-11	E601	5.1	1.7	0.51	<0.5	21	<1	5.6	9.6	<0.5	190	1.3
MTU04-E	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU04-E	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TFE-SW^c													
MTU03-I	16-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	1.5	1.3	7.3	0.87	<0.5	12	<0.5
MTU03-I	13-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	1.5	1.4	5.6	0.95	<0.5	13	<0.5
MTU03-E	16-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
MTU03-E	13-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-W													
MTU05-I	06-OCT-11	E601	<0.5	1.2	<0.5	<0.5	2.3	1.4	14	6	<0.5	32	0.5
MTU05-I	07-NOV-11	E601	<0.5	1.1	<0.5	<0.5	2	1.2	12	5.3	<0.5	29	<0.5
MTU05-I	13-DEC-11	E601	<0.5	1.2	<0.5	<0.5	2.2	1.3	14	6	<0.5	32	<0.5
TFG-1													
W-1111	03-OCT-11	E601	2.4	10	<0.5	<0.5	1.1	<1	0.57	1	<0.5	3.8	<0.5
GTU01-I	07-NOV-11	E601	2.5	10	<0.5	<0.5	1	<1	<0.5	1	<0.5	4.1	<0.5
GTU01-I	13-DEC-11	E601	2.7	10	<0.5	<0.5	1.1	<1	<0.5	1.1	<0.5	4.4	<0.5
TFG-N													
MTU02-I	11-OCT-11	E601	<0.5	2.1	<0.5	<0.5	1.3	<1	1.3	16	<0.5	5.5	<0.5
MTU02-I	07-NOV-11	E601	<0.5	1.8	<0.5	<0.5	1.2	<1	1.1	14	<0.5	4.9	<0.5
MTU02-I	13-DEC-11	E601	<0.5	1.9	<0.5	<0.5	1.2	<1	1.1	20	<0.5	5.9	<0.5
TF406													
PTU5-I	04-OCT-11	E601	<0.5	0.85	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.7	<0.5
PTU5-I	07-NOV-11	E601	<0.5	0.67	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.2	<0.5
PTU5-I	13-DEC-11	E601	<0.5	0.76	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.6	<0.5
TF406-NW^d													
W-1801	07-NOV-11	E601	<0.5	1.6	<0.5	<0.5	<0.5	<1	2.1	0.56	<0.5	14	<0.5
GTU03-I	19-DEC-11	E601	<0.5	1.4	<0.5	<0.5	<0.5	<1	4.5	0.74	<0.5	23	<0.5
GTU03-E	07-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

Sample Station	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TF406-NW (cont.)													
GTU03-E	19-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF518-N^e	---	---	--	--	--	--	--	--	--	--	--	--	--
TF5475-1^f													
W-1302-2	21-DEC-11	E601	2.9	52	2	7.4	32	1	9.8	70	<0.5	570	<0.5
TF5475-2													
GTU09-I	06-OCT-11	E601	2.2	22	0.75	3	19	<1	7	36	<0.5	310	2.9
GTU09-I	01-NOV-11	E601	2.1	22	0.68	3	19	<1	7.3	37	<0.5	340	<0.5
GTU09-I	01-DEC-11	E601	2.2	24	0.71	3.1	20	<1	7.6	40	<0.5	66	<0.5
GTU09-E	06-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	01-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GTU09-E	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TF5475-3^g	---	---	--	--	--	--	--	--	--	--	--	--	--

Notes on following page.

Table A-1. VOC analyses of influent and effluent samples by treatment facility.

^a TFA-W effluent is discharged to the Livermore Water Reclamation Plant in accordance with Permit #151OG (2006-2008). The discharge limit for Total Toxic Organics is 1.0 mg/L.

Well W-404 is sampled quarterly. All other operations have been suspended pending the extension of the TFA Arroyo Seco pipeline.

^b TFD-HPD has been modified to operate as a circulation cell to perform in situ bioremediation of contaminated ground water and sediments.

^c TFE-SW was secured and did not operate during the month of October due to HSU4 hydraulic testing.

^d TF406-NW was secured and did not operate during the month of October due to HSU4 hydraulic testing.

^e TF518-N did not operate during this reporting period due to mixed waste disposition issues.

^f TF5475-1 did not operate during this reporting period due to mixed waste disposition issues.

^g TF5475-3 did not operate during this reporting period due to mixed waste disposition issues.

Notes:

CCl₄ = Carbon tetrachloride

CHCl₃ = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFA													
W-109	12-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	0.55	1.8	<0.5	<0.5	<0.5
W-262	26-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-408	12-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	0.65	<0.5	<0.5	<0.5
W-415	12-OCT-11	E601	<0.5	1.6	0.81	<0.5	1.7	<1	<0.5	11	<0.5	1.1	<0.5
W-457	12-OCT-11	E601	<0.5	<0.5	0.89	<0.5	0.97	<1	<0.5	7.1	<0.5	<0.5	<0.5
W-518	12-OCT-11	E601	<0.5	<0.5	11	<0.5	4.6	<1	<0.5	3.8	<0.5	0.56	<0.5
W-522	12-OCT-11	E601	<0.5	<0.5	2.3	<0.5	1.5	<1	<0.5	3.8	<0.5	<0.5	<0.5
W-605	12-OCT-11	E601	<0.5	0.65	0.94	<0.5	1.3	<1	<0.5	18	<0.5	1	<0.5
W-614	12-OCT-11	E601	<0.5	0.55	<0.5	<0.5	<0.5	<1	<0.5	6.9	<0.5	<0.5	<0.5
W-712	12-OCT-11	E601	3.2	3.7	1.4	<0.5	4.4	<1	<0.5	2.1	<0.5	3.9	<0.5
W-714	12-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	8.8	<0.5	<0.5	<0.5
W-903	12-OCT-11	E601	<0.5	<0.5	1.6	<0.5	1.2	<1	<0.5	5.6	<0.5	<0.5	<0.5
W-904	12-OCT-11	E601	<0.5	<0.5	0.81	<0.5	1.2	<1	<0.5	6.6	<0.5	<0.5	<0.5
W-1001	12-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
W-1004	12-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	2.6	<0.5	<0.5	<0.5
W-1009	12-OCT-11	E601	1.2	5.9	0.84	<0.5	3.5	<1	0.59	12	<0.5	2.2	<0.5
TFA-E													
W-254	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	32	<0.5	0.93	<0.5
TFA-W													
W-404	20-DEC-11	E601	<0.5	<0.5	1	<0.5	1.7	<1	<0.5	10	<0.5	0.53	<0.5
TFB													
W-357	04-OCT-11	E601	1.6	3.2	<0.5	<0.5	1.9	<1	5.2	1.2	<0.5	39	<0.5
W-610	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	1.8	<1	2.3	0.91	<0.5	2.4	<0.5
W-620	04-OCT-11	E601	<0.5	1.4	<0.5	<0.5	1.6	<1	2.4	1.4	<0.5	5.5	<0.5
W-621	04-OCT-11	E601	<0.5	0.62	<0.5	<0.5	0.55	<1	1.3	<0.5	<0.5	4	<0.5
W-655	04-OCT-11	E601	<0.5	0.95	<0.5	<0.5	<0.5	<1	4.1	<0.5	<0.5	2.5	<0.5
W-704	04-OCT-11	E601	0.62	4.2	<0.5	<0.5	2.5	<1	6.2	3.1	<0.5	22	<0.5
W-1423	04-OCT-11	E601	0.82	5.8	<0.5	<0.5	4.1	<1	3.6	1.9	<0.5	10	<0.5
TFC													
W-701	04-OCT-11	E601	<0.5	2	<0.5	<0.5	1.4	<1	25	3.2	<0.5	20	<0.5
W-1015	04-OCT-11	E601	<0.5	0.54	<0.5	<0.5	0.8	<1	1.7	1	<0.5	4.8	<0.5
W-1102	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	2.5	<0.5	<0.5	1.7	<0.5
W-1103	04-OCT-11	E601	<0.5	<0.5	<0.5	1.1	<0.5	<1	<0.5	<0.5	<0.5	1.5	<0.5
W-1104	04-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	1.8	3.2	<0.5	6.3	<0.5
W-1116	04-OCT-11	E601	<0.5	1.3	<0.5	<0.5	<0.5	<1	6.8	3.2	<0.5	7.4	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFC-E													
W-368	12-OCT-11	E601	<0.5	7.8	<0.5	<0.5	<0.5	<1	21	2.9	<0.5	15	5.3
W-413	12-OCT-11	E601	<0.5	15	<0.5	<0.5	0.99	<1	11	<0.5	<0.5	7.9	3.7
TFC-SE													
W-1213	06-OCT-11	E601	<0.5	5.7	<0.5	<0.5	2.7	<1	9.8	<0.5	<0.5	15	<0.5
W-2201	06-OCT-11	E601	<0.5	7.8	<0.5	<0.5	2.1	<1	18	0.83	<0.5	17	1.2
TFD													
W-351	06-OCT-11	E601	26	5.1	<0.5	1	5.8	<1	5	7.1	<0.5	590	1.5
W-653 ^a	16-JUN-11	E601	6.1	4.2	<0.5	<0.5	<0.5	7.5	0.65	<0.5	<0.5	74	<0.5
W-906	06-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	3.7	<0.5
W-907-2	06-OCT-11	E601	<0.5	3.3	<0.5	<0.5	2	<1	0.71	3.7	<0.5	44	<0.5
W-2011	24-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2	<0.5
W-2101 ^b	06-OCT-11	E601	4.9	2.5	<1	<1	<1	<2	<1	<1	<1	260	<1
W-2102	24-OCT-11	E601	4.2	3.5	<0.5	<0.5	<0.5	<1	0.71	<0.5	<0.5	260	<0.5
W-1206	06-OCT-11	E601	0.9	1.1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	18	<0.5
W-1208	06-OCT-11	E601	2.4	2.2	<0.5	0.65	2.9	<1	<0.5	4.2	<0.5	77	32
TFD-E													
W-2006	01-DEC-11	E601	0.61	3.6	4.1	14	95	1.7	<0.5	86	<0.5	530	<0.5
W-1301	01-DEC-11	E601	1.2	<0.5	0.67	2.1	20	<1	<0.5	23	<0.5	110	<0.5
W-1303	12-OCT-11	E601	3.7	2.9	1.3	4.2	7.2	1.9	<0.5	8.6	<0.5	190	5.5
W-1306	01-DEC-11	E601	1.1	2.8	<0.5	<0.5	<0.5	<1	<0.5	2.1	<0.5	66	<0.5
W-1307	12-OCT-11	E601	3.6	0.96	<0.5	<0.5	<0.5	<1	<0.5	0.62	<0.5	61	<0.5
W-1404 ^a	13-APR-11	E601	1	3.3	1	8.7	13	1.3	<0.5	22	<0.5	140	0.98
W-1550	01-DEC-11	E601	6.8	4.9	<0.5	<0.5	<0.5	<1	0.87	6.9	<0.5	98	<0.5
W-2203	12-OCT-11	E601	2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	1.1	<0.5	18	<0.5
TFD-HPD													
W-1254 ^b	20-DEC-11	E601	<0.7	<0.7	<0.7	<0.7	<0.7	<1.4	<2.9	<0.7	<0.7	20	<1.4
W-1650	20-DEC-11	E601	<1	1.7	<0.5	<0.5	<0.5	1.9	<2	0.8	<0.5	140	<1
W-1653	20-DEC-11	E601	<0.5	1.6	<0.5	<0.5	<0.5	1.5	<2	0.8	<0.5	85	<1
W-1655	20-DEC-11	E601	0.8	1.9	<0.5	<0.5	<0.5	<1	<2	3.3	<0.5	67	<1
W-1657 ^b	20-DEC-11	E601	4.9	2.8	<2.5	<2.5	<2.5	<5	<10	<2.5	<2.5	370	<5
TFD-S													
W-1503	10-OCT-11	E601	2.1	2.3	<0.5	0.51	2.5	<1	0.69	3.2	<0.5	67	<0.5
W-1504	10-OCT-11	E601	<0.5	1.6	<0.5	<0.5	9.9	1.3	2.8	15	<0.5	82	<0.5
W-1510	10-OCT-11	E601	<0.5	3.4	<0.5	<0.5	1.6	<1	<0.5	2.8	<0.5	21	0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFD-SE													
W-314	04-OCT-11	E601	<0.5	1.6	0.56	<0.5	2.5	<1	0.61	4.6	<0.5	35	<0.5
W-2005	01-DEC-11	E601	<0.5	<0.5	<0.5	<0.5	2.3	<1	<0.5	13	<0.5	13	<0.5
W-1308	04-OCT-11	E601	<0.5	1.4	1.1	3	16	<1	<0.5	90	<0.5	100	<0.5
W-1403	04-OCT-11	E601	1.9	14	1.2	4.6	33	<1	3	67	<0.5	380	<0.5
W-1904 ^a	27-JUN-11	E601	<0.5	<0.5	<0.5	<0.5	15	1.8	<0.5	57	<0.5	24	<0.5
SIP-ETC-201 ^a	15-JUN-11	E601	<0.5	1.1	3.9	1.2	86	<1	<0.5	480	<0.5	300	<0.5
TFD-SS													
W-1523 ^a	19-JUL-11	E601	3.8	3.5	<0.5	1.4	12	<1	1.4	19	<0.5	140	<0.5
W-1601	21-OCT-11	E601	4	4.2	1.6	5.5	25	1.2	1.5	91	<0.5	260	<0.5
W-1602	21-OCT-11	E601	<0.5	1.4	<0.5	<0.5	<0.5	<1	<0.5	1	<0.5	14	9
W-1603	21-OCT-11	E601	0.67	2.3	1.4	4.3	17	1.6	<0.5	39	<0.5	190	7.9
TFD-W													
W-1215	04-OCT-11	E601	<0.5	7.2	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.5	22
W-1216	04-OCT-11	E601	<0.5	4.3	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	4.3	38
W-1902	04-OCT-11	E601	0.54	3.3	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	6.8	66
TFE-E													
W-566	04-OCT-11	E601	0.57	5.4	<0.5	<0.5	6.5	<1	8.5	5.1	<0.5	64	<0.5
W-1109	04-OCT-11	E601	<0.5	0.61	<0.5	<0.5	40	<1	7.2	50	<0.5	200	<0.5
W-1903	14-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	17	<1	5.6	16	<0.5	30	<0.5
W-1909	14-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	9.1	1.1	<0.5	5.4	<0.5	6.5	<0.5
W-2305	14-NOV-11	E601	<0.5	1.2	<0.5	<0.5	42	<1	7.6	58	<0.5	230	<0.5
TFE-HS													
W-2105	04-OCT-11	E601	<0.5	1.2	<0.5	<0.5	3.7	3.1	7.7	15	<0.5	330	<0.5
TFE-NW													
W-1211	21-OCT-11	E601	<0.5	1.6	<0.5	<0.5	<0.5	<1	1.4	<0.5	<0.5	9.6	<0.5
W-1409	21-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	0.69	<1	<0.5	1.3	<0.5	22	<0.5
TFE-SE													
W-359	04-OCT-11	E601	5.1	1.4	0.64	<0.5	26	<1	6	9	<0.5	340	1.4
TFE-SW													
W-1518	16-NOV-11	E601	<0.5	<0.5	<0.5	<0.5	1.5	1.3	7.5	0.98	<0.5	12	<0.5
W-1520	16-NOV-11	E601	11	8.7	<0.5	4	2.7	3.5	<0.5	14	<0.5	350	<0.5
W-1522	16-NOV-11	E601	2	3.6	1	<0.5	7.7	16	1.8	2	<0.5	89	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TFE-W													
W-292	06-OCT-11	E601	<0.5	0.88	<0.5	<0.5	1.1	3.1	1.5	1.3	<0.5	22	<0.5
W-305	06-OCT-11	E601	<0.5	1.3	<0.5	1.1	3	<1	21	8.9	<0.5	37	0.79
TFG-1													
W-1111	03-OCT-11	E601	2.4	10	<0.5	<0.5	1.1	<1	0.57	1	<0.5	3.8	<0.5
TFG-N													
W-1806	11-OCT-11	E601	<0.5	1.6	<0.5	<0.5	0.69	<1	<0.5	15	<0.5	4.3	<0.5
W-1807	11-OCT-11	E601	<0.5	2.4	<0.5	<0.5	1.7	<1	1.8	18	<0.5	6.4	<0.5
TF406													
W-1309	27-OCT-11	E601	0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	2.9	<0.5
W-1310	04-OCT-11	E601	<0.5	0.94	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	5.3	<0.5
TF406-NW													
W-1801	07-NOV-11	E601	<0.5	1.6	<0.5	<0.5	<0.5	<1	2.1	0.56	<0.5	14	<0.5
TF518-N^c													
W-1410 ^a	16-JUN-11	E601	3.4	3.1	<0.5	0.66	<0.5	<1	<0.5	0.78	<0.5	26	<0.5
TF518-PZ													
W-1615	11-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	2.4	<1	<0.5	12	<0.5	73	<0.5
W-518-1913 ^a	23-MAY-11	E601	<0.5	<0.5	<0.5	<0.5	0.76	<1	<0.5	3.8	<0.5	29	<0.5
W-518-1914	11-OCT-11	E601	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	180	<0.5	74	<0.5
W-518-1915	11-OCT-11	E601	<0.5	1.2	<0.5	<0.5	8.4	<1	<0.5	120	<0.5	1400	<0.5
SVB-518-201 ^a	07-FEB-08	E601	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	35	<0.5	8.5	<0.5
SVB-518-204 ^a	07-FEB-08	E601	<0.5	0.63	<0.5	<0.5	1.4	<1	<0.5	43	<0.5	550	<0.5
TF5475-1^c													
W-1302-2	21-DEC-11	E601	2.9	52	2	7.4	32	1	9.8	70	<0.5	570	<0.5
TF5475-2													
W-1108	06-OCT-11	E601	2.1	21	0.68	3.1	18	<1	6.7	34	<0.5	310	<0.5
W-1415 ^a	27-JUN-11	E601	<0.5	4.2	<0.5	<0.5	1.2	<1	<0.5	2.6	<0.5	20	<0.5
TF5475-3^c													
W-1604	21-DEC-11	E601	2.3	46	2.6	25	11	2.1	4.2	35	<0.5	360	<0.5
W-1605	21-DEC-11	E601	<0.5	31	0.64	5	3.9	1.4	<0.5	8.3	<0.5	82	<0.5
W-1608	21-DEC-11	E601	<0.5	27	0.54	3.3	1.7	<1	<0.5	5.1	<0.5	41	<0.5

Table A-2. VOC analyses of samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE ug/L (ppb)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
TF5475-3 (cont.)													
W-1609	21-DEC-11	E601	<0.5	41	0.78	3.7	5	<1	<0.5	9.8	<0.5	89	<0.5

Notes on following page.

Table A-2. VOC analyses of samples from treatment facility extraction wells.

^a Most recent VOC sample results available.

^b Elevated detection limit due to dilution.

^c Treatment Facility did not operate during reporting period. Please refer to Table A-1 for details.

Notes:

CCl₄ = Carbon tetrachloride

CHCl₃ = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
VTFD-ETCS													
W-1904	25-OCT-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005	0.22	<0.005	0.1	<0.005
W-ETC-2003	25-OCT-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.0084	<0.005	<0.005	0.16	<0.005	0.11	<0.005
W-ETC-2004A	25-OCT-11	TO15DIT	<0.005	0.018	<0.005	<0.005	<0.005	<0.005	<0.005	0.4	<0.005	0.17	<0.005
W-ETC-2004B	25-OCT-11	TO15DIT	<0.005	0.0098	0.0054	<0.005	0.072	<0.005	<0.005	0.64	<0.005	0.81	<0.005
SIP-ETC-201	25-OCT-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.021	<0.005	<0.005	0.3	<0.005	0.33	<0.005
VTFD-HS^a													
W-653 ^b	03-NOV-09	TO15DIT	0.026	<0.005	<0.005	<0.005	<0.005	<0.005	0.016	<0.005	<0.005	0.58	<0.005
W-2011 ^b	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.081	<0.005
W-2101 ^b	03-NOV-09	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.052	<0.005
W-2102 ^b	15-FEB-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.11	<0.005
VTFE-ELM													
W-1903	22-NOV-11	TO15DIT	<0.015	<0.015	<0.015	<0.015	0.98	<0.015	0.12	1.4	<0.015	2	<0.015
W-1909	06-OCT-11	TO15DIT	<0.005	0.034	<0.005	<0.005	0.51	<0.005	0.054	0.88	<0.005	1.2	<0.005
W-2305	06-OCT-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.2	<0.005	0.036	0.46	<0.005	0.55	<0.005
W-543-001	02-NOV-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	0.011	<0.005
W-543-003	02-NOV-11	TO15DIT	<0.005	0.017	<0.005	<0.005	0.18	<0.005	0.051	0.35	<0.005	0.65	0.0054
W-543-1908	02-NOV-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.027	<0.005	<0.005	0.14	<0.005	0.58	<0.005
VTFE-HS													
W-2105	02-NOV-11	TO15DIT	<0.005	0.0095	<0.005	<0.005	0.025	0.0071	0.11	0.26	<0.005	3.9	<0.005
W-ETS-2008A	08-NOV-11	TO15DIT	<0.0076	<0.0076	<0.0076	<0.0076	<0.0076	<0.0076	<0.0076	0.026	<0.0076	0.04	<0.0076
W-ETS-2008B	02-NOV-11	TO15DIT	<0.005	0.0052	<0.005	<0.005	0.0082	0.0074	0.027	0.51	<0.005	1.3	<0.005
W-ETS-2009	08-NOV-11	TO15DIT	<0.0076	<0.0076	<0.0076	<0.0076	<0.0076	<0.0076	0.0082	0.033	<0.0076	0.23	<0.0076
W-ETS-2010A	08-NOV-11	TO15DIT	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.017	<0.012	0.061	<0.012
W-ETS-2010B	02-NOV-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	0.014	<0.005	0.016	0.15	<0.005	0.43	<0.005
VTF406-HS													
W-217	25-OCT-11	TO15DIT	0.12	0.026	0.01	<0.005	0.95	0.011	0.14	0.85	<0.005	1.6	<0.005
W-514-2007A	25-OCT-11	TO15DIT	0.028	<0.005	<0.005	<0.005	0.021	<0.005	0.059	0.057	<0.005	0.26	1.7
W-514-2007B	25-OCT-11	TO15DIT	0.063	0.017	0.0065	<0.005	0.48	0.0051	0.053	0.33	<0.005	1	0.015
VTF511													
W-2204	13-DEC-11	TO15DIT	0.044	0.014	<0.005	0.019	0.0078	<0.005	<0.005	0.22	<0.005	2.2	<0.005
W-2205	13-DEC-11	TO15DIT	0.026	<0.005	<0.005	<0.005	0.0063	<0.005	<0.005	0.056	<0.005	0.82	<0.005
W-2206	12-DEC-11	TO15DIT	0.005	0.0079	<0.005	0.028	<0.005	<0.005	<0.005	0.11	<0.005	0.89	<0.005
W-2207A ^b	15-JUN-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	0.68	<0.005
W-2207B	25-OCT-11	TO15DIT	<0.005	0.0093	<0.005	<0.005	0.0051	<0.005	<0.005	0.019	<0.005	2.3	0.0062

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

Extraction Well	Date Sampled	Analytic Method	CCl ₄ <-	CHCl ₃ -	1,1-DCA -	1,2-DCA -	1,1-DCE PPM(V/V)	1,2-DCE -	Freon 113 -	PCE -	1,1,1-TCA -	TCE -	Freon 11 ->
VTF511 (cont.)													
W-2208A	07-DEC-11	TO15DIT	0.056	0.028	<0.02	<0.02	0.049	<0.02	<0.02	0.052	<0.02	12	0.046
W-2208B	25-OCT-11	TO15DIT	0.23	0.13	0.098	<0.033	1.3	0.2	0.1	0.56	<0.033	26	0.094
VTF518-PZ													
W-1615	20-OCT-11	TO15DIT	0.01	<0.01	<0.01	<0.01	0.51	<0.01	0.073	3	<0.01	6.2	<0.01
W-518-1913	09-NOV-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	<0.005	0.062	<0.005
W-518-1914	09-NOV-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	2.9	<0.005	0.26	<0.005
W-518-1915	20-OCT-11	TO15DIT	<0.012	<0.012	<0.012	<0.012	0.29	<0.012	<0.012	8	<0.012	8.6	<0.012
SVB-518-201	09-NOV-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SVB-518-204	09-NOV-11	TO15DIT	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.066	<0.005	0.08	<0.005
VTF5475^c													
W-ETS-507 ^b	20-JUN-11	TO15DIT	<0.005	2.8	0.0056	0.39	0.058	<0.005	0.0084	0.4	<0.005	2.2	<0.005
W-1605 ^b	06-SEP-07	TO15DI	0.0069	0.17	<0.005	0.15	0.11	<0.005	0.036	0.1	<0.005	0.85	<0.005
W-1608 ^b	06-SEP-07	TO15DI	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0061	<0.005
W-2211 ^b	28-JUN-11	TO15DIT	<0.005	0.12	<0.005	0.014	0.059	<0.005	0.035	0.044	<0.005	0.36	<0.005
W-2212 ^b	28-JUN-11	TO15DIT	0.025	0.29	0.011	0.019	0.37	<0.005	0.14	0.18	<0.005	1.2	<0.005
W-2302 ^b	28-JUN-11	TO15DIT	0.012	0.37	0.013	0.042	0.22	<0.005	0.054	0.35	<0.005	3.4	<0.005
W-2303 ^b	28-JUN-11	TO15DIT	<0.005	0.011	<0.005	<0.005	<0.005	<0.005	<0.005	0.024	<0.005	0.12	<0.005
SVI-ETS-504 ^b	28-JUN-11	TO15DIT	<0.005	0.21	0.0061	<0.005	0.055	<0.005	0.0053	0.088	<0.005	0.42	<0.005

Notes on following page.

Table A-3. VOC analyses of vapor samples from treatment facility extraction wells.

^a VTFD-HS did not operate during reporting period due to dual extraction well ground water pump failure.

^b Most recent VOC vapor sample results available.

^c VTF5475 did not operate during reporting period due to mixed waste disposition issues.

Notes:

CCl₄ = Carbon tetrachloride

CHCl₃ = Chloroform

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

1,1-DCE = 1,1-Dichloroethylene

1,2-DCE = 1,2-Dichloroethylene

Freon 113 = Trichlorotrifluoroethane

PCE = Tetrachloroethylene

1,1,1-TCA = 1,1,1-Trichloroethane

TCE = Trichloroethene

Freon 11 = Trichlorofluoromethane

VOC = volatile organic compound

Numbers in **BOLD** print indicate positive values above the detection limit.

Table A-4. Chromium analyses of influent, effluent and receiving water samples by treatment facility.

Treatment Facility	Sample Station	Date Sampled	Chromium (total)^a mg/L (ppm)	Hexavalent Chromium mg/L (ppm)
TFB	TFB-E002	04-OCT-11	0.018	NA
	TFB-E002	01-NOV-11	0.02	NA
	TFB-E002	01-DEC-11	0.011	NA
TFC	TFC-E003	04-OCT-11	0.018	NA
	TFC-E003	01-NOV-11	0.022	NA
	TFC-E003	01-DEC-11	0.022	NA
TFC-E	MTU1-I	12-OCT-11	0.032	0.038
	MTU1-E	12-OCT-11	<0.001	NA
	MTU1-E	01-NOV-11	0.0024	NA
	MTU1-E	01-DEC-11	<0.001	NA
TFC-SE	PTU1-E	06-OCT-11	0.028	NA
	PTU1-E	01-NOV-11	0.033	NA
	PTU1-E	01-DEC-11	0.02	NA

^aA discharge limit of 0.050 ppm is set for total chromium during the dry season (April 1-November 30), and no limit is set for total chromium for the wet season (December 1-March 31); however, a limit of 0.022 ppm hexavalent chromium applies during the wet season. Discharge limits are defined in the Explanation of Significant Differences for metals discharge limits (April 1997).

Shaded values exceeded the discharge limit. See text for explanation.

Explanation of Abbreviations

TFA-I001 is a sampling port located immediately prior to the TFA Treatment System.

TFA-E001 is a sampling port located immediately after the TFA Treatment System, at the beginning of the discharge pipeline.

TFA receiving water is routinely sampled at the TFG-ASW location.

TFA-W-I is an influent sampling port prior to the sediment bag filter immediately following W-404.

TFA-W-E is an effluent sampling port immediately following the sediment bag filter; the water is then discharged to the Livermore Water Reclamation Plant (LWRP).

TFB-I002 is a sampling port located immediately prior to the TFB Treatment System.

TFB-E002 is a sampling port located immediately after the TFB Treatment System, at the beginning of the discharge pipeline.

TFB-R002 is a sampling station in the drainage ditch north of TFB, located approximately 75 ft downstream from the discharge point.

TFC-I003 is a sampling port located immediately prior to the TFC Treatment System.

TFC-E003 is a sampling port located immediately after the TFC Treatment System, at the beginning of the discharge pipeline.

TFC-R003 is a sampling station in Arroyo Las Positas, located approximately 75 ft downstream from the TFC discharge point.

TFD-I004 is a sampling port located immediately prior to the TFD Treatment System.

TFD-E004 is a sampling port located immediately after the TFD Treatment System, prior to discharge to the Lake Haussmann or to the underground discharge pipeline leading to Arroyo Las Positas.

TFD-R004 is now combined with and collected at the TFC-R003 location. Results are reported under TFC-R003, as approved by the RWQCB.

CRD1-I is a sampling port located immediately prior to the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1).

CRD1-E is the effluent from the catalytic column in the Catalytic Reductive Dehalogenation treatment unit 1 (CRD1) and then reinjected at W-1302.

CRD2-I is a sampling port located immediately prior to the catalytic columns in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2).

CRD2-E is the effluent from the last catalytic column in the Catalytic Reductive Dehalogenation treatment unit 2 (CRD2) and then reinjected at W-1610.

GTU01-I is a sampling port located immediately prior to GTU01, which is currently operating in the TFG-1 area.

GTU01-E is a sampling port located immediately after GTU01, which is currently operating in the TFG-1 area.

GTU01 receiving water is routinely sampled at the TFG-ASW location.

GTU03-I is a sampling port located immediately prior to GTU03, which is currently operating in the TF406 Northwest area.

GTU03-E is a sampling port located immediately after GTU03, which is currently operating in the TF406 Northwest area.

GTU03 receiving water is routinely sampled at the TFC-R003 location.

GTU07-I is a sampling port located immediately prior to GTU07, which is currently operating in the TFE Hotspot area.

GTU07-E is a sampling port located immediately after GTU07, which is currently operating in the TFE Hotspot area.

GTU07 receiving water is routinely sampled at the TFC-R003 location.

GTU09-I is a sampling port located immediately prior to GTU09, which is currently operating in the TF5475 area.

GTU09-E is a sampling port located immediately after GTU09, which is currently operating in the TF5475 area.

GTU09 receiving water is routinely sampled at the TFC-R003 location.

MTU02-I is a sampling port located immediately prior to MTU02, which is currently operating in the TFG North area.

MTU02-E is a sampling port located immediately after MTU02, which is currently operating in the TFG North area.

MTU02 receiving water is routinely sampled at the TFC-R003 location.

MTU03-I is a sampling port located immediately prior to MTU03, which is currently operating in the TFE Southwest area.

MTU03-E is a sampling port located immediately after MTU03, which is currently operating in the TFE Southwest area.

MTU03 receiving water is routinely sampled at the TFC-R003 location.

MTU04-I is a sampling port located immediately prior to MTU04, which is currently operating in the TFE Southeast area.

MTU04-E is a sampling port located immediately after MTU04, which is currently operating in the TFE Southeast area.

MTU04 receiving water is routinely sampled at the TFC-R003 location.

MTU05-I is a sampling port located immediately prior to MTU05, which is currently operating in the TFE West area.

MTU05-E is a sampling port located immediately after MTU05, which is currently operating in the TFE West area.

Explanation of Abbreviations

MTU05 receiving water is routinely sampled at the TFC-R003 location.

MTU1-I is a sampling port located immediately prior to MTU1, which is currently operating in the TFC East area.

MTU1-E is a sampling port located immediately after MTU1, which is currently operating in the TFC East area.

MTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU1-I is a sampling port located immediately prior to PTU-1, which is currently operating in the TFC Southeast area.

PTU1-E is a sampling port located immediately after PTU-1, which is currently operating in the TFC Southeast area.

PTU1 receiving water is routinely sampled at the TFC-R003 location.

PTU2-I is a sampling port located immediately prior to PTU-2, which is currently operating in the TFD South area.

PTU2-E is a sampling port located immediately after PTU-2, which is currently operating in the TFD South area.

PTU2 receiving water is routinely sampled at TFC-R003 during the wet season.

PTU3-I is a sampling port located immediately prior to PTU-3, which is currently operating in the TFE East area.

PTU3-E is a sampling port located immediately after PTU-3, which is currently operating in the TFE East area.

PTU3 receiving water is routinely sampled at the TFC-R003 location.

PTU5-I is a sampling port located immediately prior to PTU-5, which is currently operating in the TF406 extraction location.

PTU5-E is a sampling port located immediately after PTU-5, which is currently operating in the TF406 extraction location.

PTU5 receiving water is routinely sampled at the TFC-R003 location.

PTU6-I is a sampling port located immediately prior to PTU-6, which is currently operating in the TFD West area.

PTU6-E is a sampling port located immediately after PTU-6, which is currently operating in the TFD West area.

PTU6 receiving water is routinely sampled at the TFC-R003 location.

PTU8-I is a sampling port located immediately prior to PTU-8, which is currently operating in the TFD East area.

PTU8-E is a sampling port located immediately after PTU-8, which is currently operating in the TFD East area.

PTU8 receiving water is routinely sampled at the TFC-R003 location.

PTU9-I is a sampling port located immediately prior to PTU-9, which is currently operating in the TFE Northwest area.

PTU9-E is a sampling port located immediately after PTU-9, which is currently operating in the TFE Northwest area.

PTU9 receiving water is routinely sampled at the TFC-R003 location.

PTU10-I is a sampling port located immediately prior to PTU-10, which is currently operating in the TFD Helipad area.

PTU10-E is a sampling port located immediately after PTU-10, which is currently operating in the TFD Helipad area.

PTU10 receiving water is routinely sampled at the TFC-R003 location.

PTU11-I is a sampling port located immediately prior to PTU-11, which is currently operating in the TFD Southeast area.

PTU11-E is a sampling port located immediately after PTU-11, which is currently operating in the TFD Southeast area.

PTU11 receiving water is routinely sampled at the TFC-R003 location.

PTU12-I is a sampling port located immediately prior to PTU-12, which is currently operating in the TFD Southshore area.

PTU12-E is a sampling port located immediately after PTU-12, which is currently operating in the TFD Southshore area.

PTU12 receiving water is routinely sampled at the TFC-R003 location.

STU06-I is a sampling port located immediately prior to STU06, which is operating in the TFA East area.

STU06-E is a sampling port located immediately after STU06, which is operating in the TFA East area.

STU06 receiving water is routinely sampled at the TFG-ASW location.

STU09-I is a sampling port located immediately prior to STU09, which is currently operating in the TF518-North area.

STU09-E is a sampling port located immediately after STU09, which is currently operating in the TF518-North area.

STU09 receiving water is routinely sampled at the TFC-R003 location.

Attachment B

Self-Monitoring Reports

Self-Monitoring Report

LLNL Treatment Facility A (TFA)

AREA TFA

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 711

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-04-2011
 Influent pH: 7.5
 Effluent pH: 7.5
 Effluent Temperature (°C): 19.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	659,900	15.6
W-262	24,600	20.0
W-408	1,087,800	25.5
W-415	1,496,700	32.1
W-457	434,900	10.4
W-518	179,800	4.3
W-522	672,700	18.4
W-605	363,900	8.4
W-614	356,200	8.4
W-712	271,800	6.3
W-714	346,700	8.1
W-903	1,043,500	24.3
W-904	1,573,500	37.7
W-1001	130,100	3.0
W-1004	475,400	11.4
W-1009	983,200	23.0
Total:	<u>10,100,700</u>	<u>256.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>4,686,000</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

5,414,700

6. Comments:

System down on 10-23-11 due to I/O fault. Restarted on 10-25-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-31-2011

Self-Monitoring Report

LLNL Treatment Facility A (TFA)

AREA TFA

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 541

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	514,000	16.0
W-262	0	0.0
W-408	857,100	26.5
W-415	1,271,200	41.7
W-457	280,500	10.1
W-518	139,300	4.4
W-522	486,600	14.8
W-605	278,600	8.8
W-614	277,500	8.7
W-712	217,300	6.8
W-714	259,600	8.3
W-903	546,300	17.8
W-904	1,199,600	37.4
W-1001	95,600	3.0
W-1004	366,800	11.7
W-1009	763,000	23.6
Total:	<u>7,553,000</u>	<u>239.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>3,505,800</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

4,047,200

6. Comments:

System down on 10-31-11 due to I/O fault. Restarted on 11-1-11. System down on 11-5-11 due to flooded vault. Restarted on 11-7-11. System down on 11-12-11 due to I/O fault. Restarted on 11-14-11. System down on 11-24-11 due to I/O fault. Restarted on 11-28-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 02-16-2012

Self-Monitoring Report

LLNL Treatment Facility A (TFA)

AREA TFA

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 664

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 17.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-109	888,200	16.1
W-262	0	0.0
W-408	271,600	26.6
W-415	1,512,700	38.9
W-457	862,000	10.7
W-518	171,600	4.4
W-522	628,400	15.8
W-605	345,800	8.7
W-614	345,800	8.8
W-712	265,000	6.9
W-714	319,000	8.1
W-903	645,500	16.1
W-904	1,485,200	38.2
W-1001	118,500	3.0
W-1004	450,100	11.6
W-1009	926,100	23.4
Total:	<u>9,235,500</u>	<u>237.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>4,312,900</u>

Self-Monitoring Report (cont'd)
LLNL Treatment Facility A (TFA)
AREA TFA

Arroyo Seco

TFG-ASW

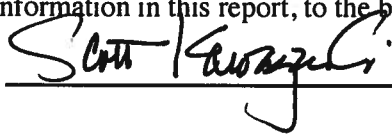
4,922,600

6. Comments:

West pipeline well flows manipulated for hydraulic test conducted from 12-1-11 through 12-12-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____



Date: 02-16-2012

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): **124**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-04-2011**

Influent pH: **7.0**

Effluent pH: **7.0**

Effluent Temperature (°C): **17.2**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	2,979	0.4
Total:	<u>2,979</u>	<u>0.4</u>

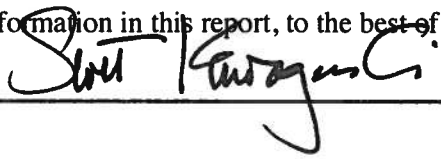
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>2,979</u>

6. Comments:

W-254 pump failed on 10-7-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **10-31-2011**

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 445

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 19.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	28,940	1.6
Total:	<u>28,940</u>	<u>1.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>28,940</u>

6. Comments:

System went down on 11-24-11 due to a fuse holder failure. Restarted on 11-29-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 12-02-2011

Self-Monitoring Report
LLNL Solar Treatment Unit 06 (STU06)
AREA TFA-E

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 633

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 19.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-254	37,423	1.0
Total:	<u>37,423</u>	<u>1.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>37,423</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-28-2011

**Self-Monitoring Report
LLNL Treatment Facility B (TFB)
AREA TFB**

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** 18 19 20 21 22 23 24 25 26 27 **28** **29** **30** **31**

Total monthly time facility operated (hours): **485**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-04-2011**

Influent pH: **7.0**

Effluent pH: **7.5**

Effluent Temperature (°C): **19.9**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	201,000	7.3
W-610	166,000	5.7
W-620	152,600	5.1
W-621	181,900	6.2
W-655	180,600	6.2
W-704	460,300	18.3
W-1423	142,000	4.9
Total:	<u>1,484,400</u>	<u>53.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>1,484,400</u>

6. Comments:

Secured for phase 2 of REVAL process(installation of GAC canisters) on 10-17-11. REVAL phase 2 completed and facility restarted on 10-28-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **10-31-2011**

Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel

1. Reporting Period: Business Month October Year 2011

2. Date compliance sampling performed 10-03-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>18.87</u>
6-day total precipitation (in):	<u>0.11</u>
Average wind speed/direction (mph):	<u>4/ S</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-10-2011

**Self-Monitoring Report
LLNL Treatment Facility B (TFB)
AREA TFB**

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 701

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 18.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	250,300	6.1
W-610	244,200	5.8
W-620	236,400	5.8
W-621	265,100	6.5
W-655	227,300	6.7
W-704	758,900	18.4
W-1423	181,700	4.8
Total:	<u>2,163,900</u>	<u>54.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,163,900</u>

6. Comments:

Secured W-655 on 11-18-11 for W-2501 pipeline tie-in. Secured facility on 11-22-11 for W-2501 pipeline tie-in. System restarted on 11-23-11. Began wet season hexavalent chromium treatment on 11-29-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-02-2011

Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel

1. Reporting Period: Business Month November Year 2011

2. Date compliance sampling performed 11-01-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>15.39</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/ ESE</u>

4. Receiving Data:

Sample Location	pH	Temperature (C)
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kragunas Date: 12-09-2011

**Self-Monitoring Report
LLNL Treatment Facility B (TFB)
AREA TFB**

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28**

Total monthly time facility operated (hours): **679**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **12-01-2011**

Influent pH: **7.5**

Effluent pH: **7.5**

Effluent Temperature (°C): **17.8**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-357	245,400	6.1
W-610	240,800	6.1
W-620	218,200	5.4
W-621	278,100	6.9
W-655	280,100	7.8
W-704	737,700	18.4
W-1423	185,600	4.9
Total:	<u>2,185,900</u>	<u>55.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>2,185,900</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-28-2011**

**Land Observation Report date:
TFB-R002 - West Perimeter Drainage Channel**

1. Reporting Period: Business Month December Year 2011

2. Date compliance sampling performed 12-01-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>10.28</u>
6-day total precipitation (in):	<u>0.02</u>
Average wind speed/direction (mph):	<u>6/ ESE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 01-13-2012

**Self-Monitoring Report
LLNL Treatment Facility C (TFC)
AREA TFC**

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 760

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-04-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 20.1

4. Wellfield Data:

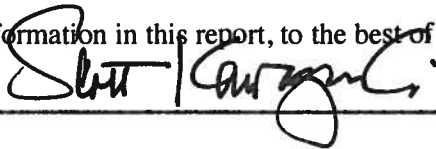
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	615,344	13.8
W-1015	192,280	4.3
W-1102	155,410	3.5
W-1103	111,766	2.0
W-1104	1,213,904	27.2
W-1116	77,514	1.7
Total:	<u>2,366,218</u>	<u>52.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,366,218</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-31-2011

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month October Year 2011

2. Date compliance sampling performed 10-03-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>18.87</u>
6-day total precipitation (in):	<u>0.11</u>
Average wind speed/direction (mph):	<u>4/ S</u>

4. Receiving Data:

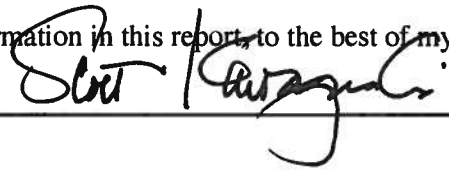
Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-10-2011

**Self-Monitoring Report
LLNL Treatment Facility C (TFC)
AREA TFC**

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **705**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-01-2011**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **19.5**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	569,760	13.7
W-1015	182,312	4.5
W-1102	147,122	3.6
W-1103	103,405	2.6
W-1104	1,133,008	27.2
W-1116	75,049	1.7
Total:	<u>2,210,656</u>	<u>53.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>2,210,656</u>

6. Comments:

Secured system on 11-22-11 to change out air stripper diffusers. Diffusers changed out and system restarted on 11-23-11. Started wet season hexavalent chromium treatment on 11-30-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-02-2011**

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month November Year 2011

2. Date compliance sampling performed 11-01-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>15.39</u>
6-day total precipitation (in):	<u>0.00</u>
Average wind speed/direction (mph):	<u>4/ ESE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kauraguchi Date: 12-09-2011

**Self-Monitoring Report
LLNL Treatment Facility C (TFC)
AREA TFC**

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 558

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011

Influent pH: 7.5

Effluent pH: 7.5

Effluent Temperature (°C): 17.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-701	456,880	13.8
W-1015	150,756	4.4
W-1102	117,722	3.6
W-1103	80,487	2.4
W-1104	897,808	27.0
W-1116	62,122	1.9
Total:	<u>1,765,775</u>	<u>53.1</u>

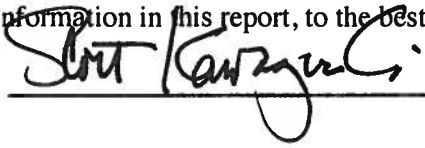
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,765,775</u>

6. Comments:

Down 12-6-11 due to high stripper level. Restarted 12-6-11. Down 12-12-11 due to high stripper level. Restarted 12-13-11. Down 12-13-11 due to high stripper level. Restarted 12-14-11. Down 12-15-11 due to high stripper level. Restarted 12-16-11. Secured 12-16-11 for planned power outage. Restarted 12-19-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-28-2011

**Land Observation Report date:
TFC-R003 - Arroyo Las Positas**

1. Reporting Period: Business Month December Year 2011

2. Date compliance sampling performed 12-01-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>10.28</u>
6-day total precipitation (in):	<u>0.02</u>
Average wind speed/direction (mph):	<u>6/ ESE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>No</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-13-2012

Self-Monitoring Report
LLNL Mini Treatment Unit 1 (MTU1)
AREA TFC-E

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 496

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-12-2011
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 22.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	109,080	3.7
W-413	479,077	16.0
Total:	<u>588,157</u>	<u>19.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>588,157</u>

6. Comments:

Facility was down for ditch maintenance. Facility only ran half days on 9/30 and 10/11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-31-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 1 (MTU1)
AREA TFC-E

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 717

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 22.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	155,470	3.7
W-413	692,133	16.0
Total:	<u>847,603</u>	<u>19.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>847,603</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-30-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 1 (MTU1)
AREA TFC-E

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 672

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 22.1

4. Wellfield Data:

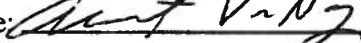
<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-368	138,873	3.7
W-413	673,553	16.7
Total:	<u>812,426</u>	<u>20.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>812,426</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-28-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 1 (PTU1)
AREA TFC-SE

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 754

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-06-2011
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 20.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	272,720	6.1
W-2201	548,185	12.2
Total:	<u>820,905</u>	<u>18.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>820,905</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-31-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 1 (PTU1)
AREA TFC-SE

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 731

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 21.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	264,963	6.1
W-2201	530,996	12.3
Total:	<u>795,959</u>	<u>18.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>795,959</u>

6. Comments:

Begin wet season hexavalent chromium treatment on 11-29-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 12-02-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 1 (PTU1)
AREA TFC-SE

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 684

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 19.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1213	249,269	6.2
W-2201	488,133	12.0
Total:	<u>737,402</u>	<u>18.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>737,402</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi Date: 12-28-2011

Self-Monitoring Report LLNL Treatment Facility D (TFD) AREA TFD

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 749

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-06-2011
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 20.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	58,100	1.3
W-653	0	0.0
W-906	175,700	4.1
W-907-2	446,500	10.2
W-2011	0	0.0
W-2101	14,300	1.3
W-2102	0	0.0
W-1206	175,700	4.1
W-1208	1,011,700	22.9
Total:	<u>1,882,000</u>	<u>43.9</u>

5. Discharge Information:

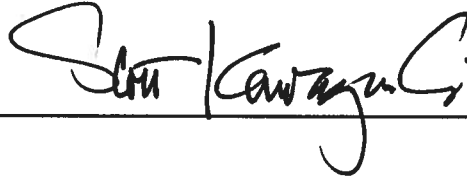
<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,882,000</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

Operator Signature: _____

A handwritten signature in black ink, appearing to read "Scott Kawaguchi", written over a horizontal line.

Date: 10-31-2011

Self-Monitoring Report

LLNL Treatment Facility D (TFD)

AREA TFD

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): 730

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 20.3

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	52,400	1.2
W-653	0	0.0
W-906	171,800	4.0
W-907-2	419,100	10.4
W-2011	0	0.0
W-2101	12,700	3.1
W-2102	0	0.0
W-1206	162,100	3.8
W-1208	973,900	22.5
Total:	<u>1,792,000</u>	<u>45.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,792,000</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

Operator Signature:  Date: 12-02-2011

Self-Monitoring Report

LLNL Treatment Facility D (TFD)

AREA TFD

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 678

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011
 Influent pH: 7.0
 Effluent pH: 7.5
 Effluent Temperature (°C): 20

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-351	47,400	1.2
W-653	0	0.0
W-906	161,400	4.0
W-907-2	433,100	8.7
W-2011	0	0.0
W-2101	11,300	3.2
W-2102	0	0.0
W-1206	153,700	3.6
W-1208	898,500	22.4
Total:	<u>1,705,400</u>	<u>43.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,705,400</u>
<u>TFD irrigation supply</u>	<u>TFD-IRR</u>	<u>0</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL Treatment Facility D (TFD)
AREA TFD

Operator Signature: _____

Steve Kavanagh

Date: 12-28-2011

Self-Monitoring Report

LLNL Portable Treatment Unit 8 (PTU8)

AREA TFD-E

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 513

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-12-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 21.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	0	0.0
W-1301	0	0.0
W-1303	120,548	5.4
W-1306	0	0.0
W-1307	182,183	6.0
W-1404	0	0.0
W-1550	0	0.0
W-2203	15,029	0.5
Total:	<u>317,760</u>	<u>11.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>317,760</u>

6. Comments:

Facility was down due to discharge pump maintenance and HSU-4 test.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-31-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 21.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	0	0.0
W-1301	0	0.0
W-1303	171,746	4.5
W-1306	0	0.0
W-1307	258,915	5.9
W-1404	0	0.0
W-1550	0	0.0
W-2203	19,365	0.5
Total:	<u>450,026</u>	<u>10.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>450,026</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-30-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 8 (PTU8)
AREA TFD-E

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 671

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 19.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2006	0	0.0
W-1301	0	0.0
W-1303	44,038	1.3
W-1306	0	0.0
W-1307	242,906	6.0
W-1404	0	0.0
W-1550	0	0.0
W-2203	16,804	0.4
Total:	<u>303,748</u>	<u>7.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>303,748</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-28-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

The facility remained off during the month so as not to interfere with the bioremediation treatability test underway at this location.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuhl Date: 11-04-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

The facility remained off during the month so as not to interfere with the bioremediation treatability test underway at this location.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____ Date: 12-07-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 10 (PTU10)
AREA TFD-HPD

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28		

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1254	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

The facility remained off during the month so as not to interfere with the bioremediation treatability test underway at this location.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuhl Date: 01-05-2012

**Self-Monitoring Report
LLNL ISB01 (ISB01)
AREA TFD-HPD**

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 85

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	2,015	0.2
W-1653	1,753	0.1
W-1655	1,845	0.2
W-1657	1,963	0.2
Total:	<u>7,576</u>	<u>0.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>7,576</u>

6. Comments:

The facility shut down several times and was down for several days due to high water level in W-1552 due to biofouling. Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system, but it was not treated. The recorded flowrate readings were taken when the facility was running in the lactate injection mode.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuhn Date: 11-10-2011

Self-Monitoring Report
LLNL ISB01 (ISB01)
AREA TFD-HPD

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 278

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	1,815	0.2
W-1653	825	0.1
W-1655	2,501	0.2
W-1657	3,019	0.2
Total:	<u>8,160</u>	<u>0.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>8,160</u>

6. Comments:

The facility shut down several times and was down for several days due to high water level in W-1552 due to biofouling. Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system, but it was not treated. The recorded flowrate readings were taken when the facility was running in the lactate injection mode. One hundred gallons of facility water was diverted to the pre-mixing tank and was not immediately injected into W-1552.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuhl Date: 12-12-2011

**Self-Monitoring Report
LLNL ISB01 (ISB01)
AREA TFD-HPD**

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 300

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1650	480	0.1
W-1653	67	0.0
W-1655	1,821	0.1
W-1657	3,052	0.2
Total:	<u>5,420</u>	<u>0.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>ISB01 injection well</u>	<u>W-1552</u>	<u>5,420</u>

6. Comments:

The facility shut down several times and was down for several days due to high water level in W-1552 due to biofouling. Compliance sampling is not required at this facility due to the fact that ISB01 is a closed loop system, and water is not discharged to the environment. Water was circulated through the system, but it was not treated. The recorded flowrate readings were taken when the facility was running in the lactate injection mode. Sixty-eight gallons of facility water were diverted to the pre-mixing tank and was not immediately injected into W-1552. The facility was shut down on 12-22-2011 and was not operated over the holidays due to freeze protection issues.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Self-Monitoring Report (cont'd)
LLNL ISB01 (ISB01)
AREA TFD-HPD

Operator Signature: Billy D. Kuhl Date: 01-13-2012

Self-Monitoring Report

LLNL Portable Treatment Unit 2 (PTU2)

AREA TFD-S

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
 October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 734

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-10-2011
 Influent pH: 7.0
 Effluent pH: 7.0
 Effluent Temperature (°C): 22.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	308,496	7.2
W-1504	347,522	8.0
W-1510	190,693	4.3
Total:	<u>846,711</u>	<u>19.5</u>

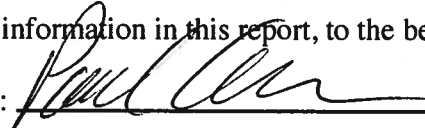
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>846,711</u>

6. Comments:

System down from 10/15/11 to 10/17/11 due to I/O fault alarm.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-02-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 2 (PTU2)
AREA TFD-S

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 728

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-03-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 21.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	354,720	8.5
W-1504	343,162	8.0
W-1510	198,466	4.3
Total:	<u>896,348</u>	<u>20.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>896,348</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 2 (PTU2)
AREA TFD-S

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 675

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-12-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 21

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1503	325,816	8.2
W-1504	316,096	7.9
W-1510	170,100	4.2
Total:	<u>812,012</u>	<u>20.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>812,012</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2012

Self-Monitoring Report
LLNL Portable Treatment Unit 11 (PTU11)
AREA TFD-SE

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 520

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-04-2011
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 21.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	310,887	10.1
W-2005	0	0.0
W-1308	95,033	2.9
W-1403	37,747	1.2
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>443,667</u>	<u>14.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>443,667</u>

6. Comments:

Facility was down due to discharge pump maintenance and HSU-4 test.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-31-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 11 (PTU11)
AREA TFD-SE

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 720

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011

Influent pH: 7.0

Effluent pH: 7.5

Effluent Temperature (°C): 21.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	442,298	10.1
W-2005	0	0.0
W-1308	136,072	3.2
W-1403	51,355	1.7
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>629,725</u>	<u>15.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>629,725</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-30-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 11 (PTU11)
AREA TFD-SE

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 670

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 21.8

4. Wellfield Data:


<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-314	418,080	10.5
W-2005	0	0.0
W-1308	124,620	3.1
W-1403	46,230	1.1
W-1904	0	0.0
SIP-ETC-201	0	0.0
Total:	<u>588,930</u>	<u>14.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>588,930</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-28-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 781

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-21-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 22.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	0	0.0
W-1601	53,791	1.2
W-1602	219,660	4.6
W-1603	237,671	14.0
Total:	<u>511,122</u>	<u>19.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>511,122</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 728

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-03-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 19.5

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	0	0.0
W-1601	49,950	1.1
W-1602	204,153	4.8
W-1603	576,417	13.7
Total:	<u>830,520</u>	<u>19.6</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>830,520</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 12 (PTU12)
AREA TFD-SS

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 674

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-13-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1523	71,614	0.0
W-1601	43,151	1.4
W-1602	187,726	4.6
W-1603	524,502	12.1
Total:	<u>826,993</u>	<u>18.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>826,993</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2012

Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 779

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-04-2011
Influent pH: 7.0
Effluent pH: 7.5
Effluent Temperature (°C): 21.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	455,615	9.7
W-1216	468,638	10.2
W-1902	843,728	18.2
Total:	<u>1,767,981</u>	<u>38.1</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,767,981</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kunkin Date: 11-04-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30**

Total monthly time facility operated (hours): **731**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-07-2011**
Influent pH: **7.5**
Effluent pH: **7.5**
Effluent Temperature (°C): **21.7**

4. Wellfield Data:


<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	421,504	9.8
W-1216	438,257	10.0
W-1902	803,170	18.2
Total:	<u>1,662,931</u>	<u>38.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,662,931</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-07-2011**

Self-Monitoring Report
LLNL Portable Treatment Unit 6 (PTU6)
AREA TFD-W

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 675

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-13-2011

Influent pH: 7.5

Effluent pH: 7.5

Effluent Temperature (°C): 20.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1215	384,320	9.5
W-1216	415,908	10.3
W-1902	726,988	18.1
Total:	<u>1,527,216</u>	<u>37.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>1,527,216</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuhl Date: 01-09-2012

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1904	137	0.0	0	0	0
W-ETC-2003	573,626	11.9	-.87	60	754
W-ETC-2004A	182,482	4.1	-5.12	60	754
W-ETC-2004B	554,336	12.0	-2.41	60	754
SIP-ETC-201	55	0.0	0	0	0
Total:	<u>1,310,636</u>	<u>28.0</u>			

4. Comments:

Secured facility 10/14/11 to perform maintenance to vacuum unit. Facility was restarted 10/14 at 14:13:50 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	458,690	10.5	-.77	58	698
W-ETC-2004A	171,970	4.2	-5.07	58	698
W-ETC-2004B	742,576	20.5	-4.39	58	698
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,373,236</u>	<u>35.1</u>			

4. Comments:

Wellfield flow rates were increased 11/10/11 in an effort to minimize the effects of condensate on wellfield instrumentation.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report

LLNL Vapor Extraction System 11 (VES11)

AREA VTFD-ETCS

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1904	0	0.0	0	0	0
W-ETC-2003	310,446	10.2	-.76	56	556
W-ETC-2004A	130,522	3.6	-4.96	56	556
W-ETC-2004B	654,155	19.9	-4.22	56	556
SIP-ETC-201	0	0.0	0	0	0
Total:	<u>1,095,123</u>	<u>33.7</u>			

4. Comments:

Vapor extraction secured 12/23/11 and unit deadheaded in an effort to protect system due to low ambient temperatures.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Home Date: 01-04-2012

Self-Monitoring Report

LLNL Vapor Extraction System 13 (VES13)

AREA VTFD-HS

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treatment facility operated

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-653	0	0.0	0	0	0
W-2011	0	0.0	0	0	0
W-2101	0	0.0	0	0	0
W-2102	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

System did not operate during this period.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Scott Kawaguchi Date: 10-31-2011

Self-Monitoring Report

LLNL Vapor Extraction System 13 (VES13)

AREA VTFD-HS

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-653	0	0.0	0	0	0
W-2011	0	0.0	0	0	0
W-2101	0	0.0	0	0	0
W-2102	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

System did not operate during this period.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-29-2011

Self-Monitoring Report

LLNL Vapor Extraction System 13 (VES13)

AREA VTFD-HS

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 30

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-653	0	0.0	0	0	0
W-2011	0	0.0	0	0	0
W-2101	0	0.0	0	0	0
W-2102	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Comments:

System did not operate during this period.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-28-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 692

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-04-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 20.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	348,869	8.5
W-1109	64,254	1.6
W-1903	41,315	0.3
W-1909	0	0.0
W-2305	128	0.0
Total:	<u>454,566</u>	<u>10.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>454,566</u>

6. Comments:

Secured facility 10/7/11 in advance of scheduled power outage. Facility was restarted 10/10 at 07:00 hrs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 664

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	335,367	8.5
W-1109	12,920	1.6
W-1903	36,340	1.1
W-1909	0	0.0
W-2305	104	0.0
Total:	<u>384,731</u>	<u>11.1</u>

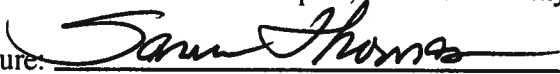
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>384,731</u>

6. Comments:

Facility secured 11/7/11 @ 11:00 hrs. to remove and replace discharge pump.
Facility was restarted 11/9/11 @ 06:45 hrs. W-1109 well pump was discovered shutdown on tripped overload breaker. Investigation by E-Techs determined pump current draw above normal operating limits and will need to be replaced.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 3 (PTU3)
AREA TFE-E

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 30
December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 707

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 20

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-566	356,196	8.5
W-1109	0	0.0
W-1903	39,986	1.2
W-1909	0	0.0
W-2305	0	0.0
Total:	<u>396,182</u>	<u>9.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>396,182</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2012

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** 18 19 20 21 22 23 **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): **585**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **10-04-2011**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **17.8**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	198	3.5
Total:	<u>198</u>	<u>3.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>198</u>

6. Comments:

Facility secured 10/17/11 as a result of new well installation at facility and the demolition of W-2012. Facility was restarted 10/24/11 @ 11:25 hrs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-01-2011**

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** 05 06 07 **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **596**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **11-01-2011**
Influent pH: **7.0**
Effluent pH: **7.0**
Effluent Temperature (°C): **19.7**

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	284	3.0
Total:	<u>284</u>	<u>3.0</u>


5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>284</u>

6. Comments:

Facility was secured 11/4/11 @ 11:45 hrs. to inspect electrical circuits and evaluate W-2105 leak detection interlock operation. Facility was restarted 11/08/11 @ 13:15 hrs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-05-2011**

Self-Monitoring Report
LLNL GAC Treatment Unit 07 (GTU07)
AREA TFE-HS

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 30

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23

Total monthly time facility operated (hours): 577

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-05-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 11.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-2105	181	3.0
Total:	<u>181</u>	<u>3.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>181</u>

6. Comments:

Facility secured and drained 12-23 to protect lines from freezing during holiday week. W-2105 operates cyclically. Flow rate, flow volume and hours of operation do not correspond.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2012

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 492

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-21-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 22.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	190,091	6.5
W-1409	66,454	2.3
Total:	<u>256,545</u>	<u>8.8</u>

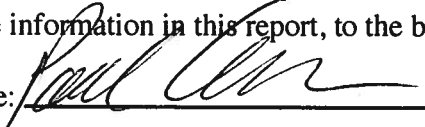
5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>256,545</u>

6. Comments:

System secure from 9/29/11 to 10/11/11 for HSU 4 testing.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 730

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-03-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	274,812	6.5
W-1409	98,759	2.3
Total:	<u>373,571</u>	<u>8.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>373,571</u>

6. Comments:

On 11/22/11 system secured to repair W-1211 influent line pipe break, system restarted upon completion of repairs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 9 (PTU9)
AREA TFE-NW

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 678

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-12-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 22.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1211	256,624	6.4
W-1409	91,997	2.3
Total:	<u>348,621</u>	<u>8.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>348,621</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2012

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 717

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-04-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 20.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	357,191	8.2
Total:	<u>357,191</u>	<u>8.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>357,191</u>

6. Comments:

Discovered facility shutdown 10/10 @ 10:20, cause of shutdown unknown.
Facility was restarted 10/10 at 10:45 hrs.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 10-31-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 692

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	343,861	8.3
Total:	<u>343,861</u>	<u>8.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>343,861</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 12-01-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 04 (MTU04)
AREA TFE-SE

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 30
December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 692

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 20.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-359	351,989	8.2
Total:	<u>351,989</u>	<u>8.2</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>351,989</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2012

Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1518	0	0.0
W-1520	0	0.0
W-1522	0	0.0
<hr/>		
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

During the HSU4 South Hydraulic Test the facility was shutdown, but 3,091 gallons of untreated water from W-1522 were pumped to a holding tank and disposed of under a WDAR.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy J. Kuhn Date: 11-07-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 495

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-16-2011

Influent pH: 7.5

Effluent pH: 7.6

Effluent Temperature (°C): 18

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1518	44,425	1.5
W-1520	31	1.2
W-1522	44	1.7
Total:	<u>44,500</u>	<u>4.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>44,500</u>

6. Comments:

The facility did not run from 11-1-11 thru 11-9-11 due to HSU4 South Hydraulic Test. The facility was restarted on 11-10-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuhl Date: 12-07-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 03 (MTU03)
AREA TFE-SW

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 666

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-13-2011
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 13.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1518	61,546	1.5
W-1520	0	0.0
W-1522	52	0.0
Total:	<u>61,598</u>	<u>1.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>61,598</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuchel Date: 01-09-2012

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 766

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-06-2011
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 26.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	262,018	5.7
W-305	401,613	8.8
Total:	<u>663,631</u>	<u>14.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>663,631</u>

6. Comments:
NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kishel Date: 11-04-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 723

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-07-2011
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 19.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	246,504	5.7
W-305	378,721	8.8
Total:	<u>625,225</u>	<u>14.5</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>625,225</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kilduff Date: 12-07-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 05 (MTU05)
AREA TFE-W

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 664

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-13-2011

Influent pH: 7.5

Effluent pH: 7.5

Effluent Temperature (°C): 18

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-292	225,896	5.6
W-305	351,188	8.7
Total:	<u>577,084</u>	<u>14.3</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>577,084</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kitchel Date: 01-09-2012

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFE-ELM

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

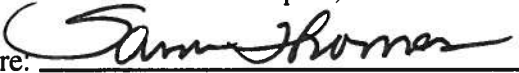
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	53,095	1.7	-14.7	72	513
W-1909	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-003	695,965	20.6	-1	72	513
W-543-1908	0	0.0	0	0	0
Total:	<u>749,060</u>	<u>22.2</u>			

4. Comments:

TFE=ELM Thermal Enhanced Remediation mode 1 operations activated 10/4/11, extracting from SVE wells 1903 and 2305. Facility secured 10/7/11 in advance of scheduled power outage. Facility was restarted 10/11/11 @ 08:00 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-08-2011

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFE-ELM

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 **15**
16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	44,688	1.3	-15.87	61	485
W-1909	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-003	584,472	20.2	-1	61	485
W-543-1908	0	0.0	0	0	0
Total:	<u>629,160</u>	<u>21.5</u>			

4. Comments:

Facility was discovered shutdown 11/7/11 due to high air coil temperature at W-1909. (air injection well) Facility remained offline while EE group investigated cause of failure. Facility was restarted 11/15/11 @ 10:40 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-05-2011**

Self-Monitoring Report

LLNL Vapor Extraction System 16 (VES16)

AREA VTFE-ELM

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1903	44,029	1.4	-16.17	58	554
W-1909	0	0.0	0	0	0
W-2305	0	0.0	0	0	0
W-543-001	0	0.0	0	0	0
W-543-003	656,782	20.8	-1	58	554
W-543-1908	0	0.0	0	0	0
Total:	<u>700,811</u>	<u>22.2</u>			

4. Comments:

Discovered facility shutdown 12/8/11 due to air coil temperature high alarm at injection well W-1909. Facility was restarted 12/8 @ 10:00 hrs. VES 16 operations secured 12/23/11 for extended holiday weekend. Vacuum unit operated in "deadhead mode" to prevent freezing of operating liquid in reservoir.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-05-2012

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFE-HS

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	16,475	0.4	-2.24	62	585
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	224,642	6.1	-2.2	62	585
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	292,844	8.2	-4.58	62	585
Total:	<u>533,961</u>	<u>14.7</u>			

4. Comments:

Facility secured 10/17/11 as a result of new well installation at facility and the demolition of W-2012. Facility was restarted 10/24/11 @ 11:25 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFE-HS

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

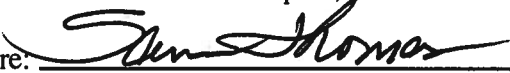
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	28,074	0.7	-4.19	64	561
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	352,441	10.1	-4.04	64	561
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	441,362	18.9	-2.03	64	561
Total:	<u>821,877</u>	<u>29.7</u>			

4. Comments:

Facility and wellfield totalizers were zeroed at start of reporting month. Facility was discovered shutdown 11/17/11 due to tripped motor overload breaker. Facility was restarted 11/22/11.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-05-2011

Self-Monitoring Report

LLNL Vapor Extraction System 12 (VES12)

AREA VTFE-HS

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2105	40,410	1.4	-2.79	60	575
W-ETS-2008A	0	0.0	0	0	0
W-ETS-2008B	250,044	7.7	-2.72	60	575
W-ETS-2009	0	0.0	0	0	0
W-ETS-2010A	0	0.0	0	0	0
W-ETS-2010B	517,982	14.6	-1.52	60	575
Total:	<u>808,436</u>	<u>23.7</u>			

4. Comments:

Facility and wellfield totalizers were zeroed at start of reporting month. Due to extended holiday week, VES 12 was secured 12/23/11, vacuum unit operating in deadhead mode.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thom Date: 01-06-2012

Self-Monitoring Report
LLNL GAC Treatment Unit 01 (GTU01)
AREA TFG-1

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 743

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 09-30-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.2

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	397,015	8.7
Total:	<u>397,015</u>	<u>8.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>397,015</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month October Year 2011

2. Date compliance sampling performed 10-03-2011

3. Weather Conditions:

Average air tempertaure (°C): 18.87

6-day total precipitation (in): 0.11

Average wind speed/direction (mph): 4/ S

4. Receiving Data:

Sample

Location pH Temperature (C)

Receiving Water N/M N/M

5. Land Observations, as "Yes" or "No", for reporting month:

Visual Observations

Effluent

Receiving Water

Floating and Suspended Materials of Waste Origin

No

No

Odor

No

No

Discoloration and Turbidity

Not Required

No

Evidence of Beneficial Water Use

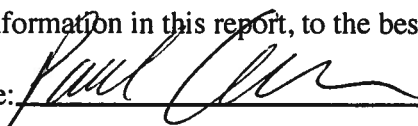
Not Required

N/A

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____



Date: 11-09-2011

Self-Monitoring Report
LLNL GAC Treatment Unit 01 (GTU01)
AREA TFG-1

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 718

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-07-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 19.7

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	388,223	9.0
Total:	<u>388,223</u>	<u>9.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>388,223</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month November Year 2011

2. Date compliance sampling performed 11-07-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>11.3</u>
6-day total precipitation (in):	<u>0.50</u>
Average wind speed/direction (mph):	<u>5/ SSE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2012

Self-Monitoring Report
LLNL GAC Treatment Unit 01 (GTU01)
AREA TFG-1

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 664

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-13-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 19.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1111	351,630	8.8
Total:	<u>351,630</u>	<u>8.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Seco</u>	<u>TFG-ASW</u>	<u>351,630</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2012

**Land Observation Report date:
TFG-ASW - Arroyo Seco**

1. Reporting Period: Business Month December Year 2011

2. Date compliance sampling performed 12-13-2011

3. Weather Conditions:

Average air tempertaure (°C):	<u>6.45</u>
6-day total precipitation (in):	<u>0.01</u>
Average wind speed/direction (mph):	<u>2/ SE</u>

4. Receiving Data:

Sample		
<u>Location</u>	<u>pH</u>	<u>Temperature (C)</u>
<u>Receiving Water</u>	<u>N/M</u>	<u>N/M</u>

5. Land Observations, as "Yes" or "No", for reporting month:

<u>Visual Observations</u>	<u>Effluent</u>	<u>Receiving Water</u>
Floating and Suspended Materials of Waste Origin	<u>No</u>	<u>No</u>
Odor	<u>No</u>	<u>No</u>
Discoloration and Turbidity	Not Required	<u>No</u>
Evidence of Beneficial Water Use	Not Required	<u>N/A</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-17-2012

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 779

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-11-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	133,979	2.9
W-1807	221,123	4.8
Total:	<u>355,102</u>	<u>7.7</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>355,102</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 728

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-07-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.8

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	128,325	2.9
W-1807	209,820	4.9
Total:	<u>338,145</u>	<u>7.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>338,145</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report
LLNL Mini Treatment Unit 02 (MTU02)
AREA TFG-N

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 674

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-13-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.6

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1806	119,347	3.0
W-1807	196,295	4.9
Total:	<u>315,642</u>	<u>7.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>315,642</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2012

Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 779

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-04-2011
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 23.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	55,995	4.5
W-1310	619,827	13.5
Total:	<u>675,822</u>	<u>18.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>675,822</u>

6. Comments:

W-1309 was started as part of the HSU4 South Hydraulic Test on 10-20-11.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy J. Kuhn Date: 11-04-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 731

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-07-2011

Influent pH: 7.5

Effluent pH: 7.5

Effluent Temperature (°C): 22.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	192,351	4.5
W-1310	583,543	13.5
Total:	<u>775,894</u>	<u>18.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>775,894</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy O. Kilduff Date: 12-07-2011

Self-Monitoring Report
LLNL Portable Treatment Unit 5 (PTU5)
AREA TF406

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 677

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-13-2011
Influent pH: 7.5
Effluent pH: 7.5
Effluent Temperature (°C): 20.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1309	177,675	4.5
W-1310	538,739	13.5
Total:	<u>716,414</u>	<u>18.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>716,414</u>

6. Comments:

NA

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kunkel Date: 01-09-2012

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

System secure from 9/15/11 through 10/31/11 for HSU 4 testing.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 550

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-07-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 22

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	129,862	3.9
Total:	<u>129,862</u>	<u>3.9</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>129,862</u>

6. Comments:

System secure from 9/15/11 to 11/7/11 for HSU 4 testing.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report
LLNL GAC Treatment Unit 03 (GTU03)
AREA TF406-NW

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 664

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-19-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 22.1

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1801	151,332	3.8
Total:	<u>151,332</u>	<u>3.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>151,332</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-03-2012

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____

Date: **10-31-2011**

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-29-2011**

Self-Monitoring Report
LLNL Solar Treatment Unit 09 (STU09)
AREA TF518-N

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 30

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1410	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 2-20-08 due to elevated tritium activities in the facility influent. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Steve Kawaguchi

Date: 12-28-2011

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

October **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
 16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29** **30** **31**

Total monthly time facility operated (hours): 741

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	128	0.0
W-518-1913	0	0.0
W-518-1914	0	0.0
W-518-1915	40	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>168</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>167</u>

6. Comments:

Water compliance sampling at this facility is not required, water is transferred to and treated at TFB main.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: _____



Date: 11-01-2011

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November **01** **02** **03** **04** **05** **06** **07** **08** **09** **10** **11** **12** **13** **14** **15**
16 **17** **18** **19** **20** **21** **22** **23** **24** **25** **26** **27** **28** **29**

Total monthly time facility operated (hours): **696**

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): **Not Measured**

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	85	0.0
W-518-1913	0	0.0
W-518-1914	0	0.0
W-518-1915	32	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>117</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>117</u>

6. Comments:

W-1615 Pnuematic pump removed from service 11/21/11. Water compliance sampling at this facility is not required, water is transferred to and treated at TFB main.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-01-2011**

Self-Monitoring Report
LLNL Treatment Facility 518-HDTANK (TF518-HDTANK)
AREA TF518-PZ

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 30

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23

Total monthly time facility operated (hours): 547

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1615	0	0.0
W-518-1913	0	0.0
W-518-1914	0	0.0
W-518-1915	28	0.0
SVB-518-201	0	0.0
SVB-518-204	0	0.0
Total:	<u>28</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>West Perimeter Drainage Channel</u>	<u>TFB-R002</u>	<u>28</u>

6. Comments:

Groundwater compliance sampling is not required, water is transferred to TFB main for treatment. Facility secured 12/23/11 and drained to protect piping from potential low ambient temperatures during holiday week.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-04-2012

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuhn Date: 11-04-2011

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy J. Kukulski Date: 12-07-2011

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 1 (CRD1)
AREA TF5475-1

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1302-2	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-1 injection</u>	<u>W-1302-1</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 7/27/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuhl Date: 01-05-2012

Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30
October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 680

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 10-06-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 19.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	205,822	4.8
W-1415	0	0.0
Total:	<u>205,822</u>	<u>4.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>205,822</u>

6. Comments:

Facility was down due to the PCL screen and electronics maintenance.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 10-31-2011

Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 714

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 11-01-2011

Influent pH: 7.0

Effluent pH: 7.0

Effluent Temperature (°C): 22.4

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	196,827	4.8
W-1415	0	0.0
Total:	<u>196,827</u>	<u>4.8</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>196,827</u>

6. Comments:

Facility was down several hours on 11-10-11 for interlock checks.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-30-2011

Self-Monitoring Report
LLNL GAC Treatment Unit 09 (GTU09)
AREA TF5475-2

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 672

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): 12-01-2011
Influent pH: 7.0
Effluent pH: 7.0
Effluent Temperature (°C): 21.9

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1108	163,609	4.4
W-1415	0	0.0
Total:	<u>163,609</u>	<u>4.4</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>Arroyo Las Positas</u>	<u>TFC-R003</u>	<u>163,609</u>

6. Comments:

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-28-2011

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

September 30

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

This treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kunkel Date: 11-04-2011

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kuth J. Date: 12-07-2011

Self-Monitoring Report
LLNL Catalytic Reductive Dehalogenation 2 (CRD2)
AREA TF5475-3

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treated ground water was discharged

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28

Total monthly time facility operated (hours): 0

3. Monthly Compliance Data:

Date compliance sampling performed (m/d/y): Not Measured

Influent pH:

Effluent pH:

Effluent Temperature (°C):

4. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(gal)</u>	<u>Instantaneous Flow Rate(gpm)</u>
W-1604	0	0.0
W-1605	0	0.0
W-1608	0	0.0
W-1609	0	0.0
Total:	<u>0</u>	<u>0.0</u>

5. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>CRD-2 injection</u>	<u>W-1610</u>	<u>0</u>

6. Comments:

The treatment facility was shut down on 8/31/07. The facility will be restarted once a solution for mixed waste generation is implemented.

7. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Betty O. Kuhl Date: 01-05-2012

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treatment facility operated


October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-217	740,320	17.8	-3.66	60	750
W-514-2007A	0	0.0	0	0	0
W-514-2007B	557,235	12.9	-4.13	60	750
Total:	<u>1,297,555</u>	<u>30.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-217	690,254	17.4	-3.66	53	701
W-514-2007A	0	0.0	0	0	0
W-514-2007B	528,270	12.6	-4.1	53	701
Total:	<u>1,218,524</u>	<u>30.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report

LLNL Vapor Extraction System 08 (VES08)

AREA VTF406-HS

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 30
 December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23

3. Wellfield Data:

<u>Source</u>	<u>Monthly</u> <u>Volume(cu. ft)</u>	<u>Instantaneous</u> <u>Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours</u> <u>of Op.</u>
W-217	572,358	13.8	-3.72	54	581
W-514-2007A	0	0.0	0	0	0
W-514-2007B	428,286	16.4	-3.34	54	581
Total:	<u>1,000,644</u>	<u>30.2</u>			

4. Comments:

Facility secured 12/23/11 due to anticipated freezing temperatures during extended holiday week.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 01-04-2012

Self-Monitoring Report

LLNL Vapor Extraction System 05 (VES05)

AREA VTF511

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treatment facility operated

October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

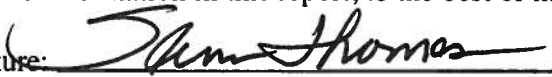
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	336,510	7.6	-5.3	60	720
W-2208A	0	0.0	0	0	0
W-2208B	348,096	7.9	-4.8	60	720
Total:	<u>684,606</u>	<u>15.5</u>			

4. Comments:

Discovered facility shutdown 10/10 @ 10:20, cause of shutdown unknown.
 Facility was restarted 10/10 at 10:35 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-01-2011

Self-Monitoring Report

LLNL Vapor Extraction System 05 (VES05)

AREA VTF511

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28 29

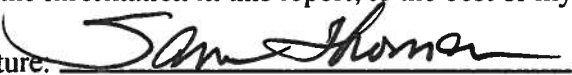
3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	0	0.0	0	0	0
W-2207B	304,838	7.2	-5.5	56	688
W-2208A	0	0.0	0	0	0
W-2208B	334,850	8.0	-4.7	56	688
Total:	<u>639,688</u>	<u>15.2</u>			

4. Comments:

Facility secured for carbon filter replacement 11/17/11 @ 08:49 hrs. Facility was restarted 11/17 @ 13:50 hrs.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 12-01-2011

Self-Monitoring Report

LLNL Vapor Extraction System 05 (VES05)

AREA VTF511

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 30

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-2204	0	0.0	0	0	0
W-2205	0	0.0	0	0	0
W-2206	0	0.0	0	0	0
W-2207A	42	0.0	0	0	0
W-2207B	182,796	4.4	-5.5	50	696
W-2208A	32	0.0	0	0	0
W-2208B	337,392	8.2	-6.3	50	696
Total:	<u>520,262</u>	<u>12.6</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Sam Thomas Date: 01-06-2012

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October **Week: 1** Year **2011**

2. Dates (in **bold** and underline) treatment facility operated

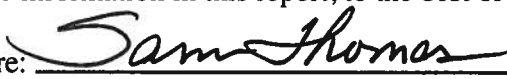
October **01** **02** **03** **04** **05** **06** **07**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	40,728	4.0	-16.5	71	170
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	8,146	0.8	-21.5	71	170
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>48,874</u>	<u>4.8</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-01-2011**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October **Week: 2** Year **2011**

2. Dates (in **bold** and underline) treatment facility operated

October **08** **09** **10** **11** **12** **13** **14**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	37,873	3.7	-18.5	68	171
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	7,165	0.7	-20	60	171
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>45,038</u>	<u>4.4</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-01-2011**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October **Week: 3** Year **2011**

2. Dates (in **bold** and underline) treatment facility operated

October **15** **16** **17** **18** **19** **20** **21**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	41,744	4.3	-18.5	50	162
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	6,796	0.7	-20.5	50	162
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>48,540</u>	<u>5.0</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **11-01-2011**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month October Week: 4 Year 2011

2. Dates (in **bold** and underline) treatment facility operated

October **22** **23** **24** **25** **26** **27**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	38,834	4.4	-18.6	44	147
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	6,178	0.7	-20.5	44	147
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>45,012</u>	<u>5.1</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: 11-03-2011

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November Week: 1 Year 2011

2. Dates (in **bold** and underline) treatment facility operated

October **28** **29** **30** **31**
November **01** **02** **03** **04**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	39,648	3.5	-21	50	189
W-518-1913	0	0.0	0	0	189
W-518-1914	0	0.0	0	0	189
W-518-1915	9,062	0.8	-20	50	189
SVB-518-201	0	0.0	0	0	189
SVB-518-204	0	0.0	0	0	189
Total:	<u>48,710</u>	<u>4.3</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-01-2011**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November **Week: 2** Year **2011**

2. Dates (in **bold** and underline) treatment facility operated

November **05** **06** **07** **08** **09** **10** **11**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	44,537	4.4	-18.5	47	169
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	8,098	0.8	-20.5	47	169
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>52,635</u>	<u>5.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-05-2011**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November Week: **3** Year **2011**

2. Dates (in **bold** and underline) treatment facility operated

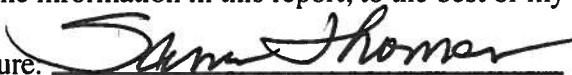
November **12** **13** **14** **15** **16** **17** **18**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	41,205	4.1	-19.5	52	168
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	8,040	0.8	-21	52	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>49,245</u>	<u>4.9</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-01-2011**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month November Week: 4 Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November **19** **20** **21** **22** **23**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	28,150	3.9	-19.8	38	120
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	5,053	0.7	-21.5	38	120
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>33,203</u>	<u>4.6</u>			

4. Comments:

Removed W-1615 Pneumatic pump from service due to erratic operation.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **12-01-2011**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December Week: 1 Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November **24** **25** **26** **27** **28** **29** **30**

December **01** **02**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	31,219	2.4	-22.5	49	217
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	10,406	0.8	-23.3	49	217
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>41,625</u>	<u>3.2</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-04-2012**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December Week: **2** Year **2011**

2. Dates (in **bold** and underline) treatment facility operated

December **03** **04** **05** **06** **07** **08** **09**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	18,941	2.2	-23	55	143
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	9,056	0.9	-26.5	55	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>27,997</u>	<u>3.1</u>			

4. Comments:

W-1615 vapor extraction terminated 12/08/11 due to accumulation of sediment in casing.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-06-2012**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December **Week: 3** Year **2011**

2. Dates (in **bold** and underline) treatment facility operated

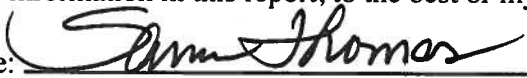
December **10** **11** **12** **13** **14** **15** **16**

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	0	0.0	0	0	0
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	11,161	1.1	-26.5	40	169
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>11,161</u>	<u>1.1</u>			

4. Comments:

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-04-2012**

Self-Monitoring Report
LLNL Vapor Extraction System 19 (VES19)
AREA VTF518-PZ

1. Reporting Period: Business Month December Week: **4** Year **2011**

2. Dates (in **bold** and underline) treatment facility operated

December 17 18 19 20 21 22 23

3. Wellfield Data:

<u>Source</u>	<u>Weekly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-1615	0	0.0	0	0	0
W-518-1913	0	0.0	0	0	0
W-518-1914	0	0.0	0	0	0
W-518-1915	13,073	1.3	-26.2	38	168
SVB-518-201	0	0.0	0	0	0
SVB-518-204	0	0.0	0	0	0
Total:	<u>13,073</u>	<u>1.3</u>			

4. Comments:

Facility secured 12/23/11 an advance of upcoming holiday week.

5. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:  Date: **01-04-2012**

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month October Year 2011

2. Dates (in **bold** and underline) treatment facility operated

September 30
 October 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:



Date: 11-04-2011

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month November Year 2011

2. Dates (in **bold** and underline) treatment facility operated

November 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature:

Billy D. Kautel

Date: 12-07-2011

Self-Monitoring Report

LLNL Vapor Extraction System 01 (VES01)

AREA VTF5475

1. Reporting Period: Business Month December Year 2011

2. Dates (in **bold** and underline) treatment facility operated

December 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25 26 27 28

3. Wellfield Data:

<u>Source</u>	<u>Monthly Volume(cu. ft)</u>	<u>Instantaneous Flow Rate(scfm)</u>	<u>P(in. Hg)</u>	<u>T(°F)</u>	<u>Hours of Op.</u>
W-ETS-507	0	0.0	0	0	0
W-1605	0	0.0	0	0	0
W-1608	0	0.0	0	0	0
W-2211	0	0.0	0	0	0
W-2212	0	0.0	0	0	0
SVI-ETS-504	0	0.0	0	0	0
W-2303	0	0.0	0	0	0
W-2302	0	0.0	0	0	0
Total:	<u>0</u>	<u>0.0</u>			

4. Discharge Information:

<u>Discharge Location</u>	<u>Receiving Water Station</u>	<u>Volume</u>
<u>VTF5475 Vapor Injection Well</u>	<u>SVI-ETS-505</u>	<u>0</u>

5. Comments:

This treatment facility was shut down on 10-12-07 due to a FY2008 funding reduction. The facility will be restarted once a solution for mixed waste generation is implemented.

6. I certify that the information in this report, to the best of my knowledge, is true and correct.

Operator Signature: Billy D. Kilduff Date: 01-05-2012

Attachment C

Lake Haussmann

Attachment C

Lake Haussmann Fourth Quarter 2011 Monitoring Program Summary

This attachment summarizes the fourth quarter 2011 LLNL Environmental Functional Area data for Lake Haussmann. Lake Haussmann is an artificial water body with a 37 acre-ft capacity. It is located in the central portion of the Livermore Site (Fig. C-1) and receives storm water runoff and treated ground water discharges.

Water discharged from Lake Haussmann is sampled and analyzed as outlined in Jackson (2002). The discharge samples are used to determine compliance with discharge limits in the *Record of Decision* (DOE, 1992), and the subsequent *Explanation of Significant Differences for Metals Discharge Limits* (Berg et al., 1997).

Dry season (June, July, August, and September) discharges are sampled at each manual release or monthly during periods of continual release. Wet season (October through May) discharge samples are collected at the first release of the wet season and one other discharge in conjunction with a storm water monitoring event. Analytical results of discharge samples collected at location CDBX are compared with the LLNL Arroyo Las Positas outfall sample results collected at location WPDC (Fig. C-1). The results for samples collected at locations CDBX and WPDC are presented in Table C-1. All PCBs were below detection limits. No metals or VOCs exceed discharge limits. Acute and chronic bioassay tests showed no toxicity. The pH values did not exceed the desired range of 6.5 to 8.5.

Discharge from Lake Haussmann remained continuous during the fourth quarter, with one exception. No discharge occurred from September 30 to October 11, 2011, to support mitigation of invasive species in Arroyo Las Positas. The Lake Haussmann upper weir gate was otherwise maintained at the lowered position during the remainder of the fourth quarter, so that releases occurred continuously to minimize changes in surface water level and allow for a more natural ecosystem.

References

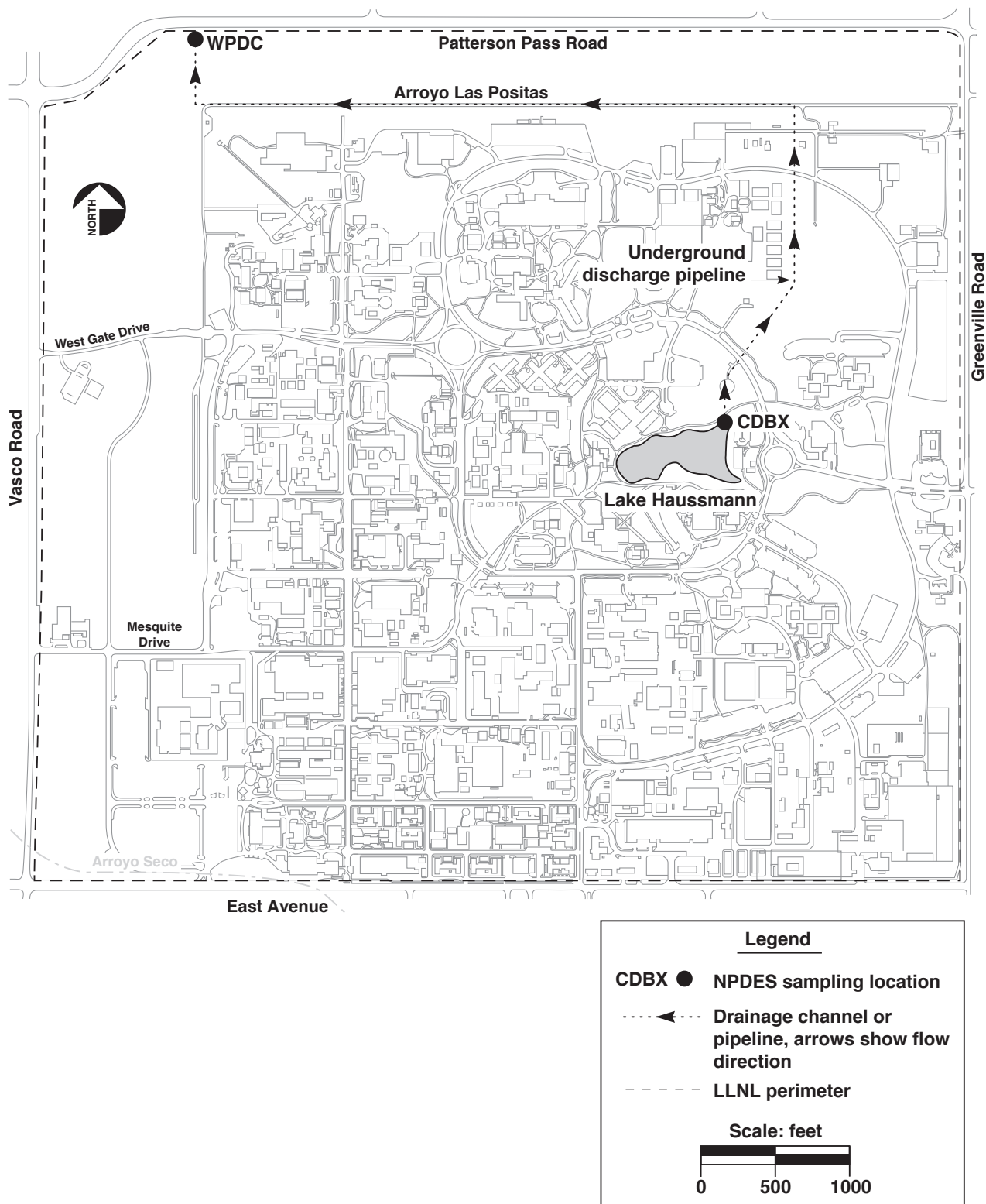
- U.S. Department of Energy, *Record of Decision for the Lawrence Livermore National Laboratory, Livermore Site*, Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-109105, (1992).
- Berg, L.L., E.N. Folsom, M.D. Dresen, R.W. Bainer, and A.L. Lamarre, Eds., *Explanation of Significant Differences for Metals Discharge Limits at the Lawrence Livermore National Laboratory, Livermore Site*, Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-125927 (1997).
- Jackson, C.S., *Drainage Retention Basin Monitoring Plan Change*, Letter to Ms. Naomi Feger, San Francisco Bay RWQCB, Lawrence Livermore National Laboratory, Livermore, CA, WGMG02:175:CSJ:RW:kh, (December 6, 2002).

Table C-1. LLNL Lake Haussman release monitoring data for points CDBX and WPDC, October through December 2011.

CDBX 10/11/11				WPDC 10/11/11	Discharge Limits 1-Apr through 30-Nov	Discharge Limits 1-Dec through 30-Mar
Physical						
pH	EPA-150.1	Units	8.5	8.3	not <6.5 or >8.5	not <6.5 or >8.5
Total dissolved solids (TDS)	EPA-160.1	mg/L	650	630	na	na
Total suspended solids (TSS)	EPA-160.2	mg/L	180	31	na	na
Polychlorinated biphenyls						
PCB 1016	EPA-8082	ug/L	<0.5	a	na	na
PCB 1221	EPA-8082	ug/L	<0.5	a	na	na
PCB 1232	EPA-8082	ug/L	<0.5	a	na	na
PCB 1242	EPA-8082	ug/L	<0.5	a	na	na
PCB 1248	EPA-8082	ug/L	<0.5	a	na	na
PCB 1254	EPA-8082	ug/L	<0.5	a	na	na
PCB 1260	EPA-8082	ug/L	<0.5	a	na	na
Metals						
Antimony	EPA-200.8	mg/L	<0.005	<0.005	0.006	na
Arsenic	EPA-200.8	mg/L	<0.002	<0.002	0.05	0.01
Beryllium	EPA-200.8	mg/L	<0.0002	<0.0002	0.004	na
Boron	EPA-200.7	mg/L	2.1	0.88	na	na
Cadmium	EPA-200.8	mg/L	<0.0005	<0.0005	0.005	0.0022
Chromium	EPA-200.8	mg/L	0.016	0.014	0.05	na
Copper	EPA-200.8	mg/L	0.003	0.0024	1.3	0.0236
Hexavalent Chromium	EPA-218.6	mg/L	0.0056	0.0098	na	0.022
Iron	EPA-200.7	mg/L	1.2	1.2	na	na
Lead	EPA-200.8	mg/L	<0.005	<0.005	0.015	0.0064
Manganese	EPA-200.8	mg/L	0.1	<0.03	na	na
Mercury	EPA-245.1	mg/L	<0.0002	<0.0002	0.002	0.002
Nickel	EPA-200.8	mg/L	0.01	0.0038	0.1	0.32
Selenium	EPA-200.8	mg/L	0.0039	<0.002	0.05	0.01
Silver	EPA-200.8	mg/L	<0.001	<0.001	0.1	0.0082
Thallium	EPA-200.8	mg/L	0.001	<0.001	0.002	na
Zinc	EPA-200.7	ug/L	41	24	na	0.22
Organics^b						
Tetrachloroethene	EPA-601	ug/L	<0.5	a	4	4
Vinyl chloride	EPA-601	ug/L	<0.5	a	2	2
Radiological						
Alpha	EPA 900.0	pCi/L	4.15	a	na	na
Beta	EPA 900.0	pCi/L	4.45	a	na	na
Tritium	EPA 906.0	pCi/L	163	a	20,000	20,000
Herbicides						
Bromacil	EPA-525.2	ug/L	<1	a	na	na
Diuron	EPA-632	ug/L	<1	a	na	na
Glyphosate	EPA-547	ug/L	<25	a	na	na
Acute Toxicity						
Aq. Bioassay, Survival	FISHTOX1P	%	100	100	70	70
Chronic Toxicity						
Aq. Bioassay, Fathead Growth	E1000TOX	%	100	a	70	70
Aq. Bioassay, Fathead Survival	E1000TOX	%	100	a	70	70
Aq. Bio., Water flea (ceriodaphnia) Survival	E1002TOX	%	100	a	70	70
Aq. Bio., Algae (selenastrum) Growth	E1003TOX	%	100	a	70	70
Nitrate (as NO3)	EPA-300.0	mg/L	25	a	na	na
Chemical Oxygen Demand	EPA-410.4	mg/L	<25	a	na	na
Total Organic Carbon (TOC)	EPA-415.1	mg/L	3.8	a	na	na

a) Sampling for these analytes not required at this location.

b) VOCs reported are the constituents of concern for CDBX and WPDC sampling locations.



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Figure C-1. Location of Lake Haussmann showing discharge sampling locations.

Attachment D

Figures

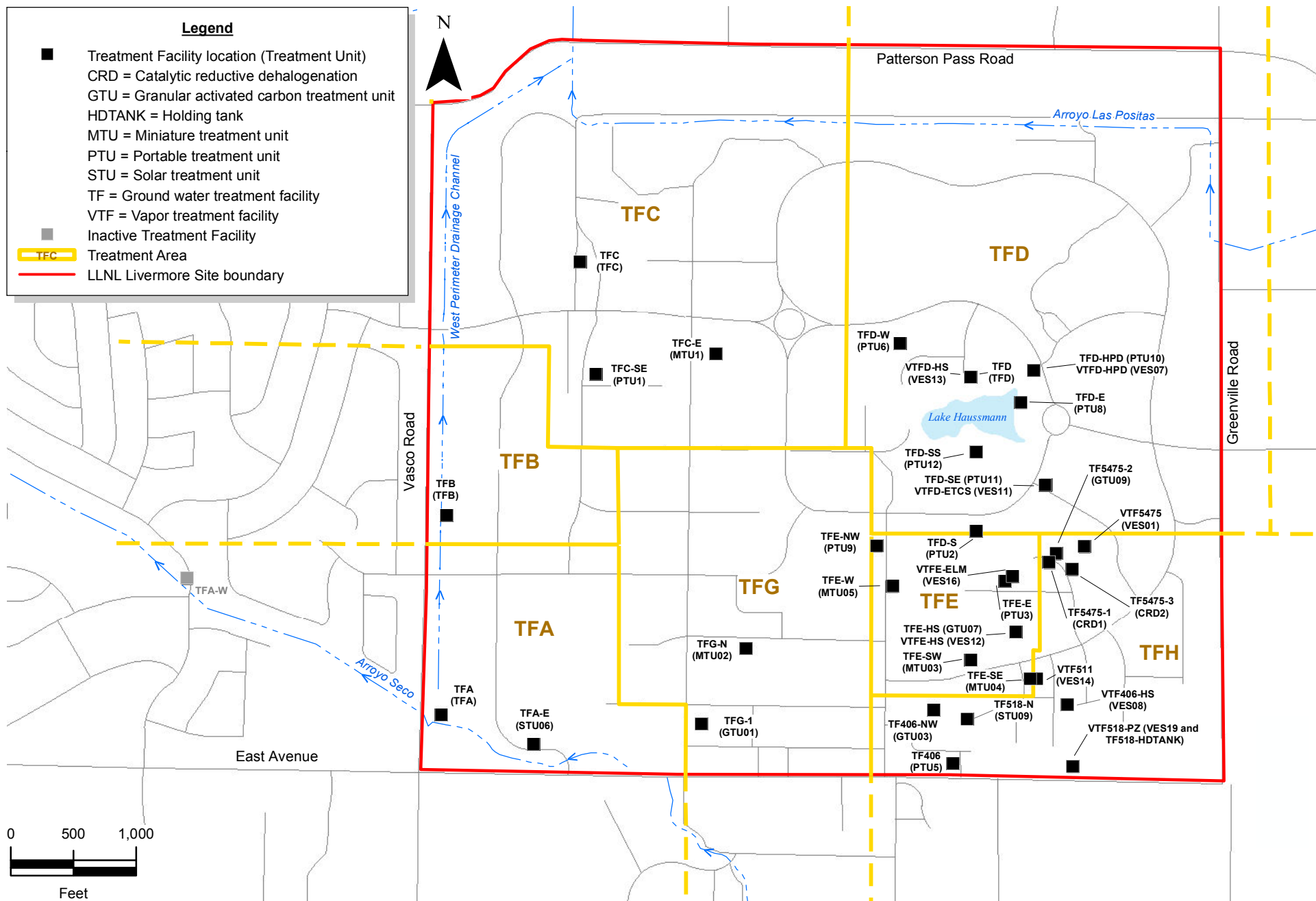


Figure 1. Livermore Site treatment areas and treatment facility locations.

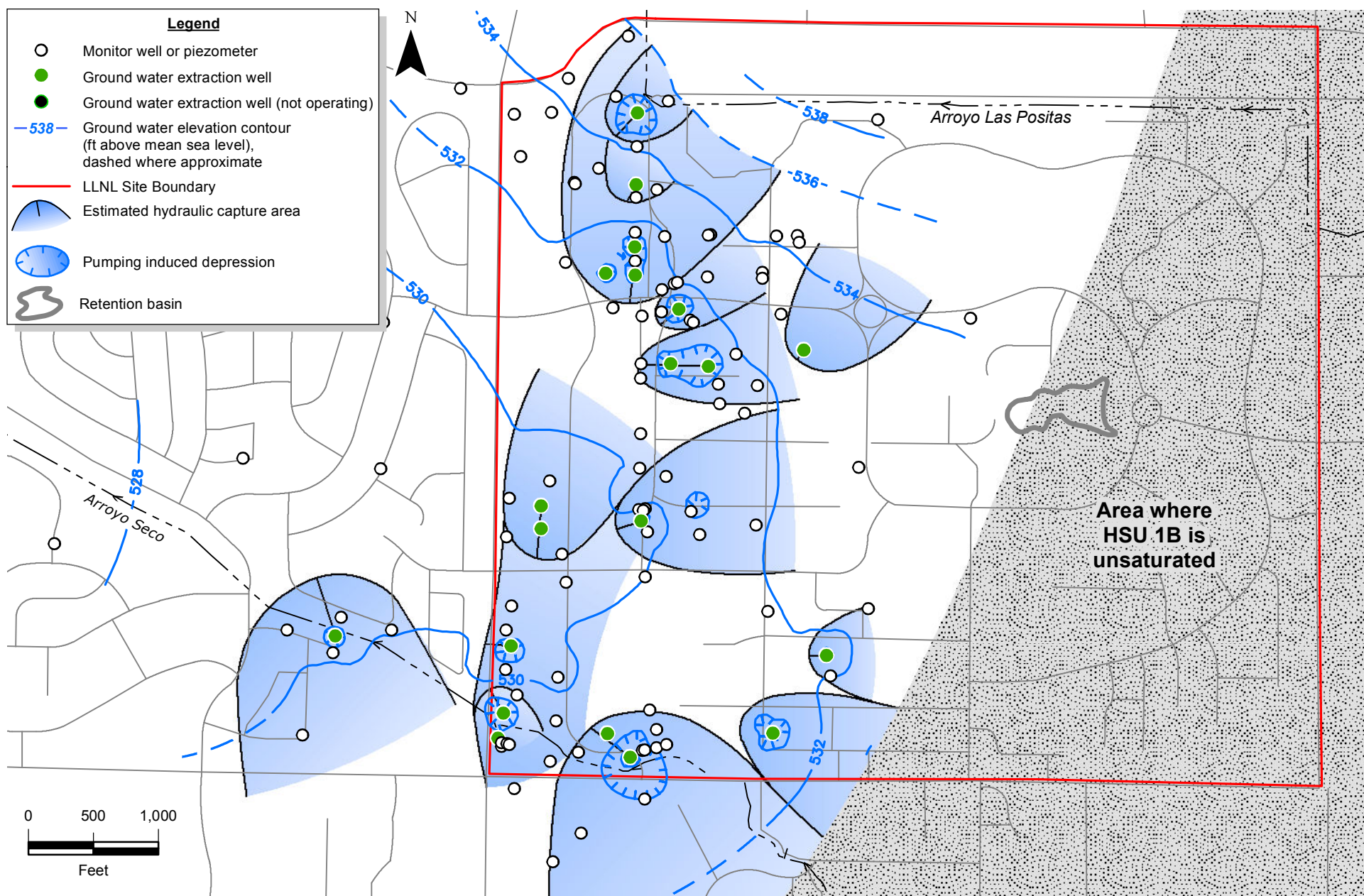


Figure 2. Ground water elevation contour map based on 116 wells completed within HSU-1B showing estimated hydraulic capture areas, LLNL and vicinity, fourth quarter 2011.

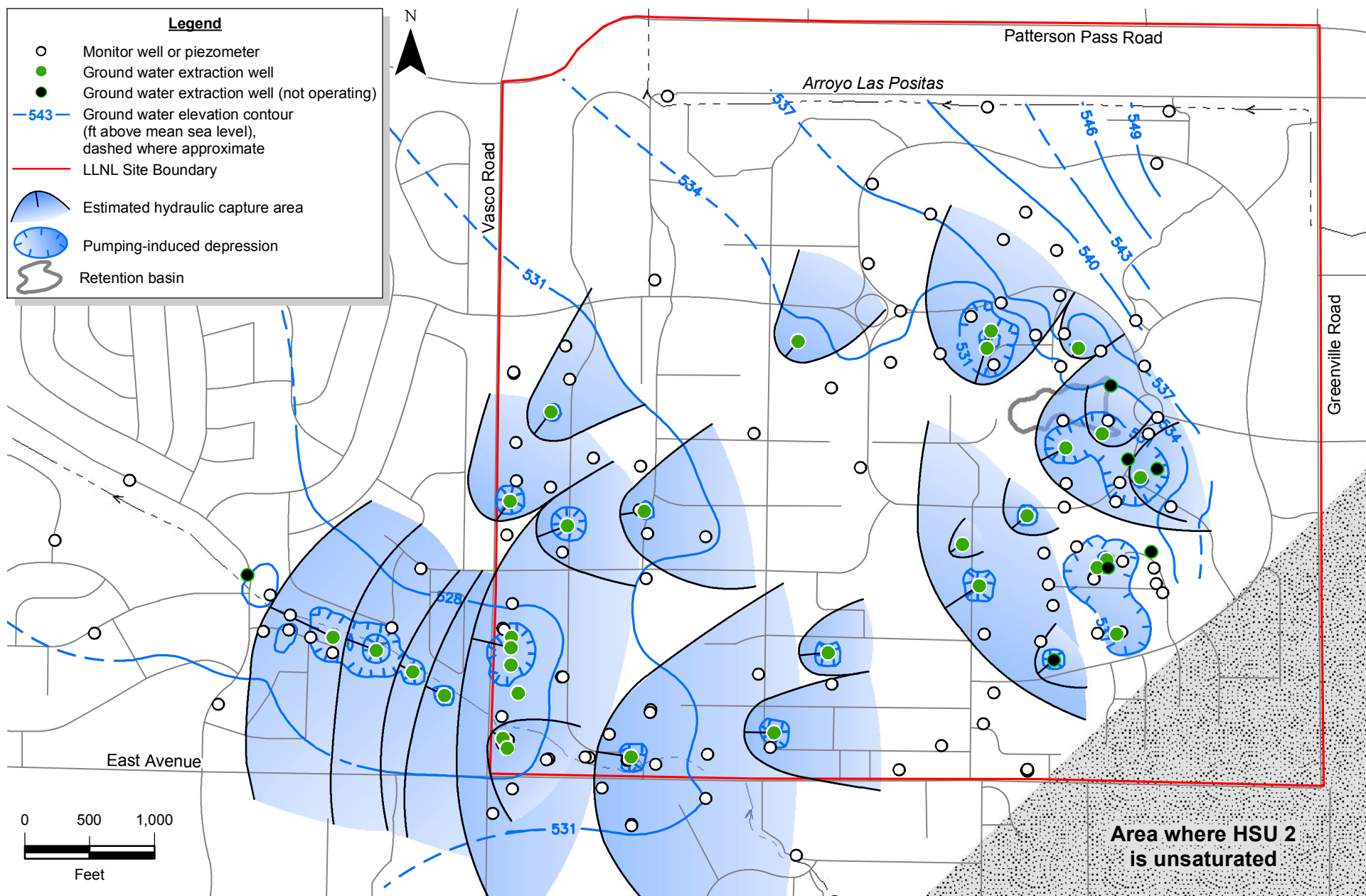


Figure 3. Ground water elevation contour map based on 151 wells completed within HSU-2 showing estimated hydraulic capture areas, LLNL and vicinity, fourth quarter 2011.

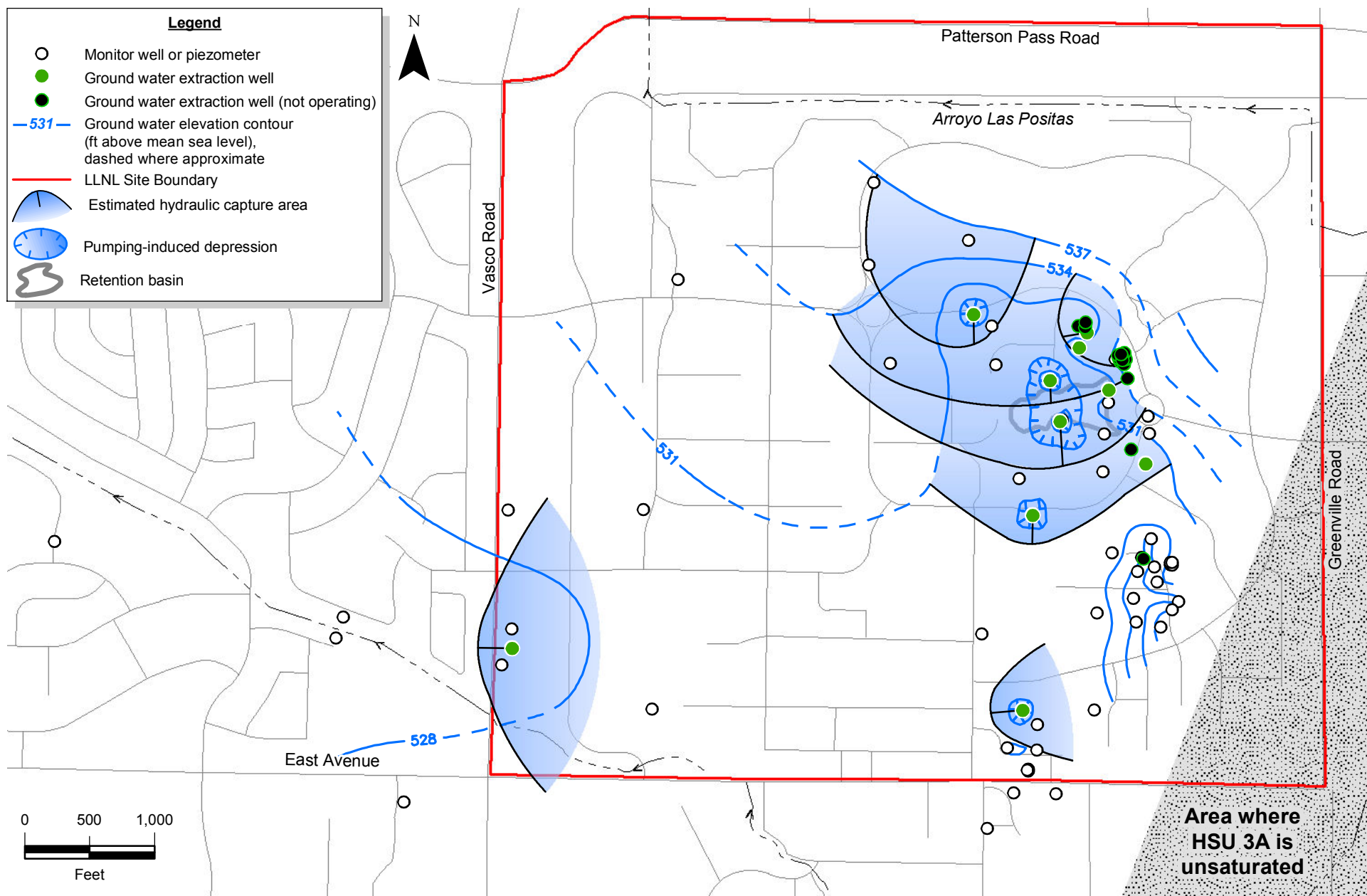


Figure 4. Ground water elevation contour map based on 77 wells completed within HSU-3A showing estimated hydraulic capture areas, LLNL and vicinity, fourth quarter 2011.

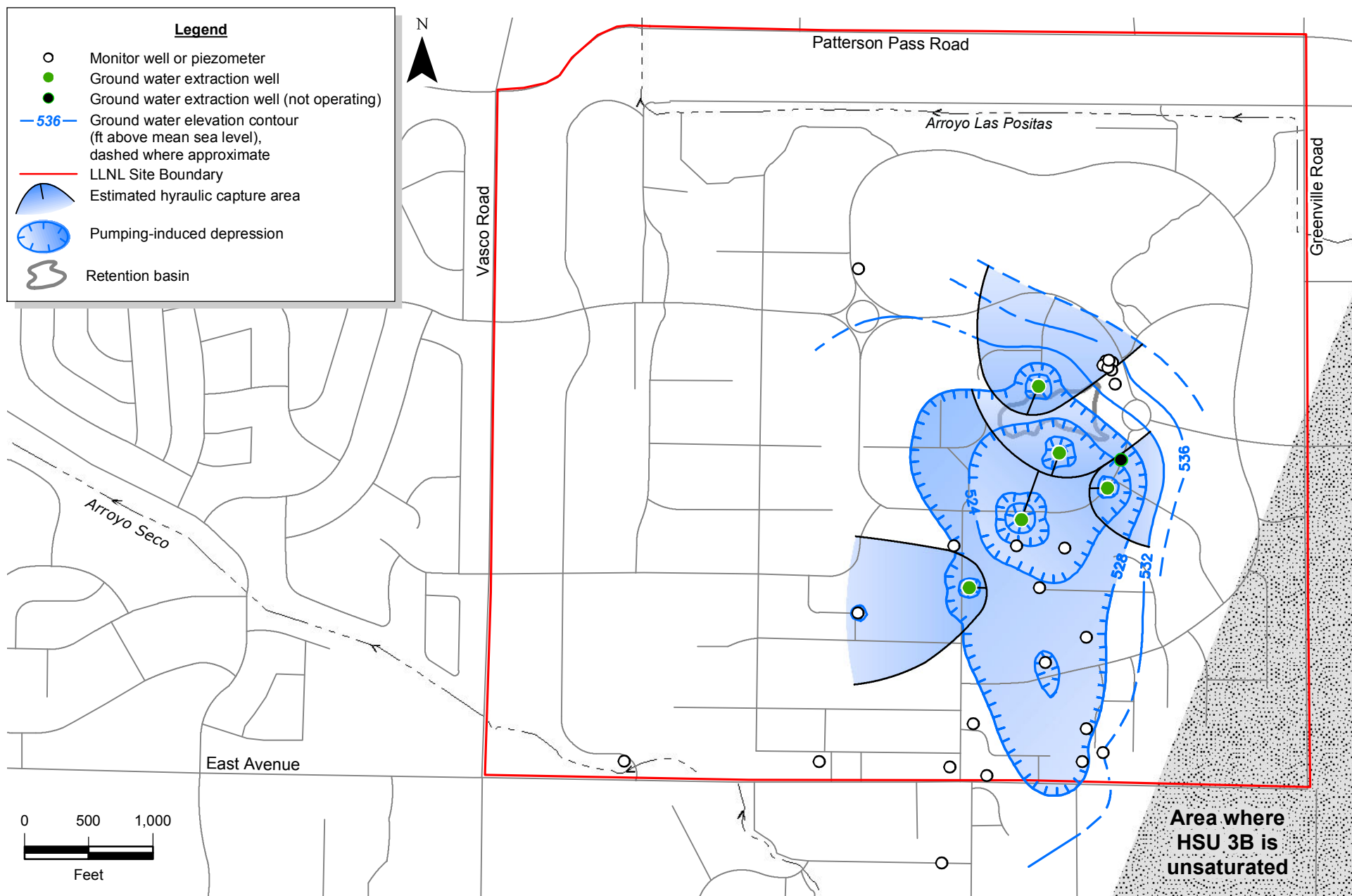


Figure 5. Ground water elevation contour map based on 32 wells completed within HSU-3B showing estimated hydraulic capture areas, LLNL and vicinity, fourth quarter 2011.

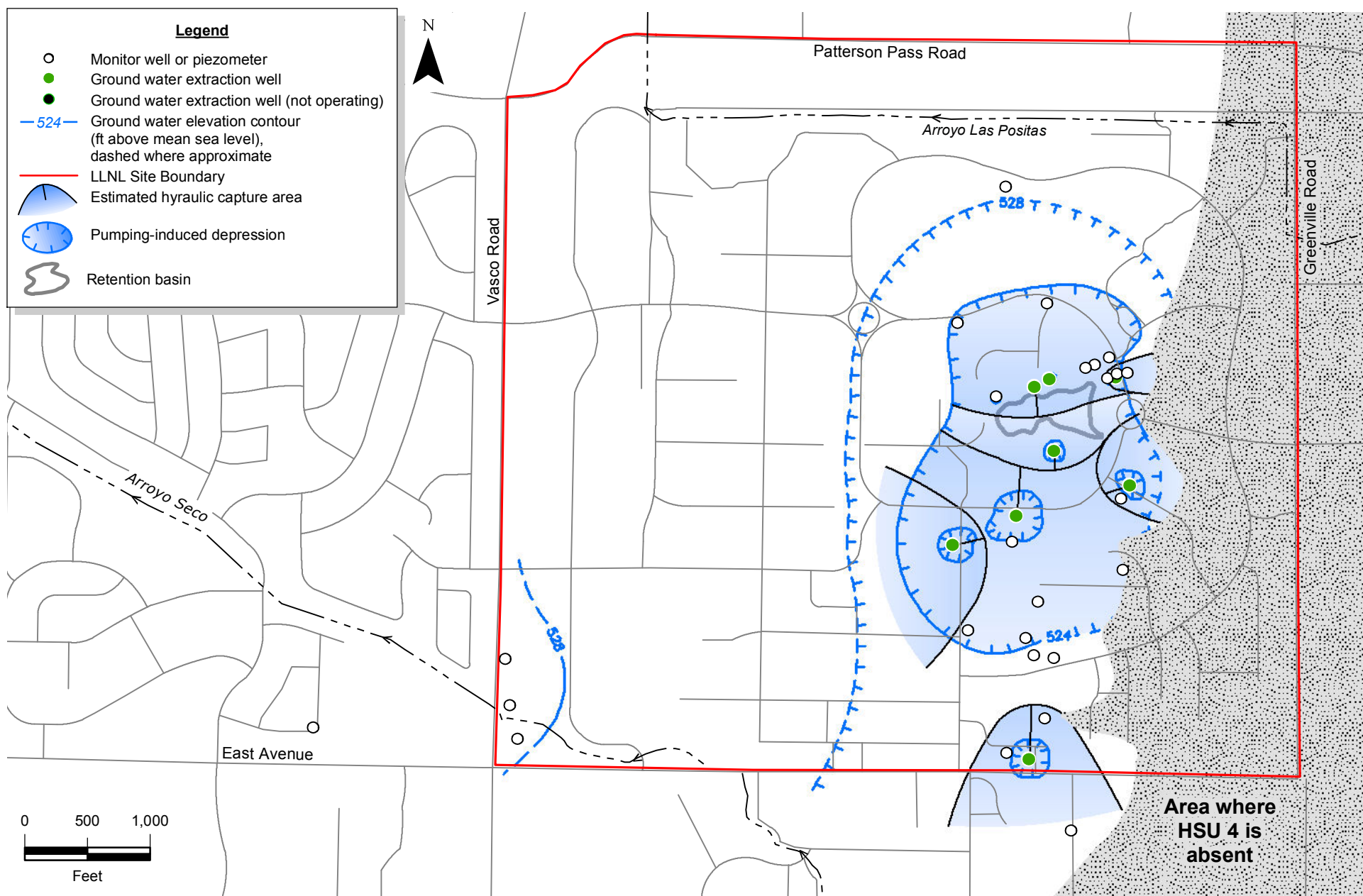


Figure 6. Ground water elevation contour map based on 34 wells completed within HSU-4 showing estimated hydraulic capture areas, LLNL and vicinity, fourth quarter 2011.

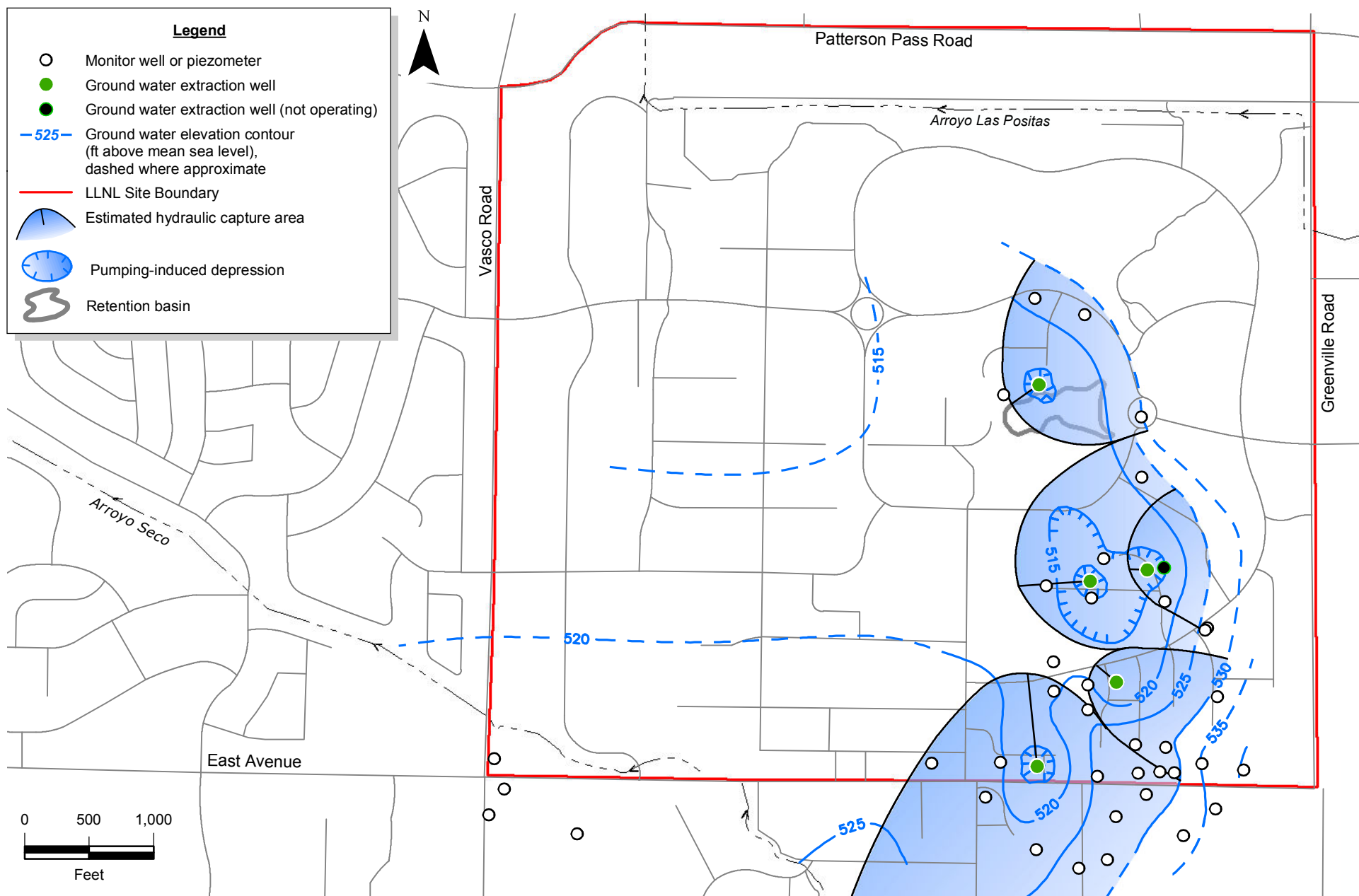


Figure 7. Ground water elevation contour map based on 48 wells completed within HSU-5 showing estimated hydraulic capture areas, LLNL and vicinity, fourth quarter 2011.